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TRANSACTIONS

OF THE

Medical Association

COMPLIMENTS OF

THE MEDICAL ASSOCIATION OF GEORGIA.

JAS. B. BAIRD, M. D., SECRETARY,

63 WHITEHALL ST., ATLANTA, GA.

Resolved, That this Association shall not be considered as indorsing the views of authors of papers published in connection with the Transactions, unless definitely so indorsed in the proceedings of the Association.

Resolved, That the above resolution appear annually upon the title page of our published proceedings.—[*Transactions*, 1873.]

ATLANTA, GEORGIA:
JAMES R. HARRISON & CO., PRINTERS AND BINDERS.
1878.

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JNO. THAD. JOHNSON, ATLANTA.

VICE-PRESIDENTS:

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THOMAS H. KENAN, MILLEDGEVILLE.

SECRETARY:

JAS. B. BAIRD, ATLANTA.

TREASURER:

WM. R. RURGESS, MACON.

ORATOR:

E. H. RICHARDSON, JR. CEDAR TOWN.

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T. J. CHARLTON, - (1875.)
R. M. SMITH, - - - (1876.)
CHARLES H. HALL, - (1877.)
G. W. HOLMES, - - - (1878.)

Annual Committees.

Committee on Publication.—Jas. B. Baird, *ex-officio,* William R. Burgess, William S. Armstrong, V. H. Taliaferro, Wm. Abram Love.

Committee of Arrangements.—Robert Battey, J. B. S. Holmes, G. W. Holmes, T. J. Word, W. D. Hoyt, William Farrell, J. M. Gregory.

Committee on Necrology.—R. P. Myers, H. V. Johnson, W. H. Hall, W. A. Love, A. Sibley Campbell.

Special Committees.

CENTENNIAL COMMITTEE.—V. H. Taliaferro, Jno. M. Johnson, W. A. Love.

COMMITTEE ON PERFECTING ROLL OF MEMBERSHIP.—W. A. Love, W. F. Holt, B. R. Dostor.

COMMITTEE TO REPRESENT THE INTEREST OF THE STATE BOARD OF HEALTH BEFORE THE LEGISLATURE.—W. A. Love, Jno. M. Johnson, J. F. Alexander, William O'Daniel, T. S. Hopkins.

COMMITTEE TO MEMORIALIZE THE LEGISLATURE FOR THE REMOVAL OF THE SPECIAL TAX IMPOSED UPON PHYSICIANS.—*Local:* F. King, Jno. M. Johnson, W. F. Westmoreland, C. W. Nutting, C. A. Simpson. *General:* W. M. Charters, B. R. Dostor, T. F. Walker, A. W. Griggs, J. G. Westmoreland, C. H. Hall, C. P. Gordon, W. H. Doughty, R. M. Smith.

COMMITTEE TO MEMORIALIZE THE LEGISLATURE TO ENACT A LAW PROVIDING COMPENSATION FOR EXPERT TESTIMONY IN THE COURTS.—W. R. Burgess, A. W. Calhoun, J. P. Logan, Robert Battey, J. C. LeHardy, A. Sibley Campbell, Geo. J. Grimes.

COMMITTEE TO MEMORIALIZE THE LEGISLATURE RELATIVE TO THE PROPER CARE OF THE INSANE.—V. H. Taliaferro, Robert Battey, T. S. Powell.

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.—(*Twenty-ninth Session, Buffalo,* 1878.)—J. G. Thomas, Jno. D. Martin, J. C. LeHardy, Robert Battey, W. F. Holt, H. F. Campbell, G. G. Crawford, A. W. Calhoun, S. H. Stout, Thomas Raines, W. F. Westmoreland, Robert Eve, Jas. B. Baird, F. A. Stanford, Geo. J. Grimes, T. H. Kenan, P. L. Hillsman, J. E. Blackshear, Geo. F. Cooper, D. Taylor Johnson, A. Means, A. W. Griggs, B. R. Dostor, R. M. Smith, J. P. Logan, Jno. M. Johnson, T. S. Powell, Jno. S. Coleman, DeSaussure Ford, H. Smith, V. H. Taliaferro, W. B. Wells, T. S. Hopkins, R. J. Bruce, C. W. Long, R. F. Wright, J. B. S. Holmes, F. R. Calhoun, J. R. McAfee, J. W. Bailey, W. G. Drake, C. A. Simpson, L. G. Alexander, Charles Rauschenberg, W. O'Daniel.

Sections.

1st District—
Practice—J. G. Thomas, Wm. Duncan, John Martin.
Surgery—R. P. Myers, G. A. Stone, J. W. Norton.
Gynæcology—J. B. Read, J. C. LeHardy, J. P. S. Houstoun.

2d District—
Practice—W. M. Bruce, P. L. Hillsman, W. W. Twitty.
Surgery—B. R. Dostor, W. A. Strother, T. S. Hopkins.
Gynæcology—W. B. Tackett, E. W. Alfriend, T. A. Chappell.

3d District—
Practice—A. R. Taylor, A. W. Reese, S. B. Hawkins.
Surgery—F. M. Jordan, Geo. F. Cooper, A. A. Smith.
Gynæcology—T. F. Walker, J. W. Tucker, J. B. Hinkle.

4th District—
Practice—A. W. Griggs, D. W. Johnson, P. M. Tidwell.
Surgery—G. J. Grimes, W. W. Fitts, John T. Slaughter.
Gynæcology—J. W. Griggs, F. A. Stanford, F. L. Wisdom.

5th District—
Practice—Jas. B. Baird, Paul Faver, J. G. Westmoreland.
Surgery—A. W. Calhoun, T. L. Lallerstedt, J. A. McKown.
Gynæcology—J. P. Logan, K. P. Moore, T. M. Darnell.

6th District—
Practice—Wm. F. Holt, Henry Gaither, H. V. Johnson.
Surgery—P. H. Wright, J. B. Hendrick, S. L. Richardson.
Gynæcology—W. O'Daniel, W. R. Burgess, J. E. Blackshear.

7th District—
Practice—A. S. Fowler, J. B. S. Holmes, E. H. Richardson, Jr.
Surgery—R. T. Wright, W. S. Kendrick, W. B. Wells.
Gyæcology—Robert Battey, C. P. Gordon, F. R. Calhoun.

8th District—
Practice—W. H. Doughty, W. W. Battey, W. H. Foster.
Surgery—A. S. Campbell, DeSaussure Ford, A. E. Dugas.
Gynæcology—H. F. Campbell, J. S. Coleman, R. C. Eve.

9th District—
Practice—W. T. Hollingsworth, I. H. Goss, J. S Simmons.
Surgery—L. G. Hardman, A. A. Bell, R. M. Smith.
Gynæcology—C. W. Long, J. W. Bailey, G. F. Wirsen.

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MINUTES

OF THE

MEDICAL ASSOCIATION OF GEORGIA.

TWENTY-NINTH ANNUAL SESSION.

FIRST DAY—MORNING SESSION.

ATLANTA, GA., April 17, 1878.

The Medical Association of Georgia convened this day, in the Senate Chamber, and was called to order by the retiring President, Dr. Robert Battey.

The exercises were opened with prayer, by Rev. J. H. Martin, pastor of the First Presbyterian Church.

Dr. John M. Johnson, chairman of the committee of arrangements, was then introduced, and delivered the following address of welcome:

[The Secretary has used extraordinary diligence to procure a copy of the address, but his repeated solicitations have failed to evoke a single response from the author, and he finally yields, with reluctance, to the necessity of omitting this portion of the proceedings.]

Dr. W. M. Charters, of Savannah, in behalf of the Association, responded as follows:

Gentlemen of the Committee of Arrangements:

Called upon, as I am, without timely notice, to respond to the kind welcome extended to us by your chairman, in behalf of the medical

profession of Atlanta, you will not expect from me an elaborate, or even a well considered reply.

In behalf of the Association, I can assure you that we too deeply sympathize in the feelings of regret expressed by your chairman to ignore their cause, or to enter freely upon the consideration of other subjects. We, too, had indulged the hope of meeting to-day such an assemblage of the members of our Association as would honor our State and worthily represent the energy and professional zeal, which, notwithstanding present appearances, we believe exists among our brethren. When our meetings are held on the sparcely populated seaboard, in the city of Savannah, for instance, lying in the angle of a quadrant, with South Carolina on one side, and the wide ocean on the other, and with a hundred miles or more of almost desert country spread out toward the interior, we are not discouraged if our assemblages are small in numbers. But in this large and flourishing city, so centrally located in the most populous portion of our State, so easily approached from all points of the compass, and having in its population so large a number of able physicians, we were warranted in expecting a much larger meeting of our members, to unite in thanking you for your kind welcome, and in enjoying the advantages of the occasion. We will hope, however, that no feelings of discouragement or of discontent will be permitted to mar the pleasures of our meeting today, or to enfeeble our efforts for the accomplishment of substantial good while we remain together. We can assure you that we in no degree connect any regret we may feel with the action of your committee, which we know has been untiring in its efforts to secure success.

We are associated, gentlemen, for the advancement of two great and worthy purposes: For our mutual improvement in the scientific and practical knowledge of our profession, and for the promotion of good fellowship among its members. The first of these purposes might perhaps, in a good degree, be accomplished by other methods. The papers read in our meetings and published in our transactions might be contributed to the medical journals which circulate extensively among the profession, and thus do their proper work, perhaps, as effectually and cheaply as by our present method. But for the accomplishment of our second purpose, the successful cultivation of good fellowship, personal acquaintance is the only effectual means. A kind glance, a warm grasp of the hand, a bright smile at meeting, and the slight tremor of the voice in the good-bye, will generate and nurture friendships that will

bear the tests of time and separation. Well may we remember the exhortation, delivered long ago to a very different body, but forever expressing one of the chief needs of all associations of men: "Love one another;" or, if this seems to demand too tender an emotion, we should all be able to receive and adopt the modification: "Respect one another;" and it is not too much to say that, without that personal and professional respect for each other which is inculcated in our received ethics, the mutual help and support which is essential to the well-being of associations like this cannot be realized.

Permit me to close by assuring you, in behalf of the members of the Association, of our determination to strive for the attainment of the happy results to which I have referred, and to beg you to accept our thanks for the hearty welcome you give us, and for the kind words in which it is expressed.

Dr. Robert Battey, after a few appropriate valedictory remarks, introduced the President-elect, Dr. Wm. O'Daniel, who proceeded to deliver the President's annual address. [Appendix.]

The Committee of Arrangements reported the following gentlemen present, duly registered and entitled to participate in the deliberations of the Association: [A few names were added subsequently. SEC.]

J. E. H. Ware, P. M. Tidwell, W. A. Camp, A. C. Perry, W. A. Love, A. Means, J. T. Banks, A. A. Bell, P. H. Wright, H. V. M. Miller, E. K. Bozeman, J. B. Roberts, W. C. Moore, W. G. Drake, F. L. Wisdom, George G. Crawford, C. Pinckney, L. H. Alexander, O. R. Ford, D. T. Nash, B. F. Shefftal, William P. Harden, H. B. Lee, J. C. Olmsted, J. T. Johnson, J. S. Todd, John D. Martin, A. A. Smith, J. T. Slaughter, T. S. Powell, Ch. Rauschenberg, H. L. Wilson, F. R. Calhoun, T. L. Lallerstedt, C. W. Nutting, A. W. Griggs, Thomas S. Mitchell, A. Sibley Campbell, James B. Baird, J. P. Logan, S. H. Stout, Robert Battey, C. A. Simpson, W. S. Kendrick, J. B. S. Holmes, E. H. Richardson, Jr., A. R.

Taylor, W. W. Fitts, T. M. Shaw, J. J. Knott, Paul Faver, W. O'Daniel, W. B. Wells, T. F. Walker, J. G. Slappey, J. M. Boring, Thomas H. Kenan, B. R. Dostor, C. W. Long, J. W. Baily, J. G. Westmoreland, W. F. Westmoreland, Wm. R. Burgess, R. M. Smith, J. R. Humphries, J. L. Hamilton, V. H. Taliaferro, J. F. Alexander, G. G. Roy, W. T. Hollingsworth, W. T. Goldsmith, A. B. Copeland, W. W. Evans, D. H. Howell, W. M. Charters, Henry LeHardy, J. C. LeHardy, M. P. Deadwiler, R. B. Ridley, L. G. Hardman, Wm. S. Armstrong, I. H. Goss, J. F. Wirsen, George J. Grimes, F. M. Jordan, E. L. Connally, W. B. Tackett, Thomas Raines, Samuel S. Shields, A. W. Calhoun, Wm. F. Holt, J. B. Read, Hiram Smith, E. J. Roach, John M. Johnson, K. P. Moore, J. O. Perkins, D. G. Hunt, D. T. Johnson, T. W. Sims, T. P. Janes, R. J. Bruce, J. T. Moore, A. J. Pinson, T. W. Dean, J. W. Griggs, R. F. Wright, W. L. Sterling.

The Committee of Arrangements recommended that the daily sessions be held in the morning from ten to one o'clock, and in the afternoon from three to six o'clock. They also announced that the annual oration would be delivered at the hour of noon on the second day. Adopted.

Letters were read by the Secretary from Drs. E. W. Alfriend, J. B. S. Holmes, Thomas F. Green and R. G. Norton, in which the writers expressed regret at their inability to be present, and wished the Association a pleasant and profitable session.

The following names were presented for membership, and referred, under the rules, to the Board of Censors: Drs. W. W. Fitts, Carrollton; A. R. Taylor, Hawkinsville; F. M. Jordan, Cochran; G. G. Roy, Atlanta; T. M. Shaw, Coosaville; E. H. Richardson, Jr., Cedar Town; and W. B. Tackett, Cuthbert.

By Dr. T. F. Walker:

Resolved, That the clergy, visiting physicians, medical officers of the army and navy, and representatives of the press be invited to seats on the floor.

Adopted.

Reports of special committees being in order, the Centennial Committee was called. In the absence of the chairman, Dr. V. H. Taliaferro, further time was granted.

The Committee on Perfecting the Roll of Membership, through the chairman, Dr. W. A. Love, asked to be continued until the next meeting. Granted.

The Committee on Revision of the Constitution and By-Laws presented, through the chairman, Dr. Robert Battey, the following report:

The committee to whom was referred the subject of ways and means for meeting the annual expenses of the Association, beg leave to offer the accompanying resolutions as amendments to the by-laws of the Association:

Resolved, That an initiation fee of *five dollars* shall be required of every new member hereafter elected into the Association; which fee must accompany the application for membership.

Resolved, That an annual dues of *two dollars* from each member in attendance upon the meetings of the Association shall be paid, and the name of the member registered, before taking his seat in the Association, or participating in its deliberations.

Resolved, That an annual dues of *one dollar* from each absent member of the Association shall be paid to the Treasurer, on or before the first day of May of each current year.

Resolved, That the Treasurer shall, immediately after each meeting of the Association, issue a call for the dues of absent members, by postal card, impressing upon them the need of prompt payment of the small assessment herein provided by every member of the Association, and notifying them of the constitutional provision requiring the names of delinquents to be stricken from the roll of membership by the Secretary.

Your committee would further recommend that opportunity be afforded to present delinquent members to continue their membership by

the payment of dues for the present year, as provided in the above resolutions.

Dr. G. F. Wirsen moved to strike out one dollar, in the third paragraph, and insert two dollars. Lost.

The report was then adopted by ayes, 43; nays, 1.

By Dr. Jas. F. Alexander:

Resolved, That the foregoing report be considered in force from its adoption, and be so construed as to apply to members present at this meeting.

Adopted.

Dr. Robert Battey moved that thirty days of grace be allowed members in arrears for two years, to pay up, before their names are stricken from the roll. Adopted.

Dr. W. A. Love, chairman of the committee appointed to present the claims of the State Board of Health before the Legislature and the Constitutional Convention, made a verbal report to the effect that it was deemed inexpedient and useless to present the matter to the attention of the Constitutional Convention, and, as no Legislature had convened since the appointment of the committee, he requested that the committee be continued. Granted.

The name of Dr. S. S. Shields, Crawfordville, was presented for membership, and referred, under the rules, to the Board of Censors.

The President announced the appointment of Dr. J. C. LeHardy to fill the vacancy in the Board of Censors created by the absence of Dr. T. J. Charlton.

By Dr. A. W. Griggs:

Resolved, That the special committee on the State Board of Health be instructed to memorialize the Legislature to empower the Medical Association of Georgia to appoint a Sanitary Board for the State. The Legislature to make an appropriation sufficient to defray the expenses of the same.

Adopted.

The Board of Censors reported favorably upon the applications for membership of Drs. G. G. Roy, F. M. Jordan, W. W. Fitts, T. M. Shaw, E. H. Richardson, Jr., A. R. Taylor, S. S. Shields, and W. B. Tackett. Adopted.

The following invitation was read and accepted:

Dr. John M. Johnson will be pleased to see the members of the Medical Association of Georgia at his residence, No. 72 Marietta street, this evening, at 9 o'clock.

ATLANTA, WEDNESDAY, April 17th.

The Association then adjourned until three o'clock.

FIRST DAY—AFTERNOON SESSION.

The Association was called to order at three o'clock, by the President.

The resignations of Drs. George M. McDowell, B. F. Chambliss, J. C. C. Blackburn, J. E. Cook, B. F. Rudisill, T. J. Collier, and E. Fitzgerald, as members of the Association, were read, and referred, under the rules, to the Board of Censors.

The committee appointed to memorialize the Legislature for the removal of the special tax upon physicians, was called, and, through the chairman, asked further time. Granted.

Dr. James B. Baird, chairman of the Committee on Publication, presented the following report:

The Committee on Publication beg leave to report:

That six hundred copies of the Transactions for 1877, of two hundred pages each, were issued, at a total cost of $282, less $100 paid by the publisher for the privilege of inserting in the back of the volume ten pages of advertisements. The actual cost per volume, delivered, including wrappers and seven cents postage each, was thirty-seven and five-sixth cents.

The paper, typography and general make-up of the volume will com-

pare favorably with any similar publication in the United States, with the exception of three or four, which are supplied with a more elegant binding.

Four hundred and sixty-five copies were distributed to the members of the Association, thirty-five copies to the various State medical societies, about forty copies to medical journals throughout the country, and the remainder, except a reserve of thirty copies, retained for future calls. were forwarded, upon request, to boards of health, local societies and other medical organizations throughout the several States of the Union.

All of the papers presented at the last meeting of the Association that received the approval of the committee, and a paper entitled "Occlusion of the vagina—operation—cure," accidentally omitted from the volume of Transactions for 1876, were published, together with the constitution and by-laws, the code of medical ethics, and the roll of membership, as required by resolution of the Association.

In revising the roll for publication, the names of the following gentlemen were omitted at their own written request: Drs. H. H. Carlton, Athens; J. L. Cheny, Columbus; D. W. Marks, Augusta; and R. C. Word, Atlanta. These requests were made in reply to the demands of the Treasurer for dues, on the several grounds of never having been members, of having resigned, or of being placed upon the roll without their knowledge or consent; and the committee did not feel justified in publishing the names of gentlemen in the face of their written protests.

The committee regrets the necessity of repeating what has so often been said in preceding annual reports to this body, that the delay on the part of members in responding to the calls of the Treasurer for dues, explains the fact that the Transactions were not placed in the hands of the publisher before July, or distributed until September and October.

If the obligations of the members were promptly met, in this particular, the Transactions could easily be issued within six weeks of the adjournment of every session.

As Secretary, it becomes my duty to present to the attention of the Association an obscure regulation relating to its government, and ask for instructions in relation thereto.

The third amendment to the by-laws, adopted at the twenty-eighth session, in Augusta, April, 1876, provides, that "The name of any member who shall fail, for two consecutive years, to pay the annual assessment, shall be dropped from the roll of membership, the Treasurer first notifying such member of the state of his account."

Two years from the adoption of this amendment end with the commencement of this, the thirtieth session. The hour that the thirtieth session is organized, the assessment for that year becomes due, and the fiscal year of the preceding session expires. So, under the operation of the amendment, on this, the seventeenth day of April, 1878, all members who are in arrears for two consecutive years must be stricken from the roll, provided they have been notified by the Treasurer of the state of their accounts

Nevertheless, as no provision has been made for executing this rule, as it is not made the specific duty of the Secretary, or any other person, to erase the names of delinquent members, who are subject, under the third amendment, the regulation has not been enforced, and it remains for the Association to decide how this law shall be carried into effect.

I deem it appropriate, in this place, to acknowledge the receipt of the published Transactions of the following State Medical Societies for 1877: Alabama, Arkansas, California, Colorado, Connecticut, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, and Wisconsin.

Also, the proceedings of the Georgia Pharmaceutical Association.

The Secretary has been informed of the appointment of Dr. A. P. Van Derveer, of Montgomery, as delegate to this meeting from the Medical Association of the State of Alabama.

Adopted.

The Committee on Necrology presented a partial report, and Dr. W. A. Love, in behalf of the committee, asked time for its completion, and the privilege of placing it in the hands of the Committee on Publication, without first submitting it to the Association. Granted. [Appendix.]

Under the call of sections from the several congressional districts, the following reports were presented by title, to be called up at the pleasure of the Association:

Dr. B. R. Dostor: "Amputation of the leg for necrosed tibia of thirty-four years standing."

Dr. T. F. Walker: "Abnormal conception;" also, "Eclampsia."

Dr. Geo. J. Grimes: "Tubercular meningitis."

Dr. A. W. Griggs: "Report of cases."

Dr. W. A. Love: "Menstrual derangements resulting from mechanical obstructions and misplacements."

Dr. Thos. H. Kenan: "Report of the section on surgery for the Sixth Congressional District."

Dr. A. Mathis: "A case of abdominal dropsy tapped ninety-six times in nineteen months, and two hundred and forty-two gallons of fluid withdrawn."

The regular order being the presentation of voluntary communications, to be read by title, and held subject to the pleasure of the Association—

Dr. W. A. Love announced a paper on "The diagnostic value of the soft palate, as compared with the tongue, in certain pathological conditions;" also, "Saccharated medicines."

Dr. J. C. LeHardy: "Yellow fever: its history, causes, nature, pathology and treatment, considering exclusively the epidemic of 1876 in Savannah."

Dr. Jas. B. Baird: "Neuralgia, and its modern therapeusis."

Dr. Henry Gaither: "Puerperal eclampsia."

Dr. A. W. Calhoun: "Report of one hundred and twenty-five operations for the relief of strabismus."

Dr. Charles Rauschenberg: "Blood-letting—its physiological effect and therapeutical use."

Dr. S. H. Stout: "Non-syphilitic psoriasis;" also, "Case of a child two years old who swallowed three fluid ounces of kerosene oil."

Dr. T. S. Powell: "The true physician."

Dr. V. H. Taliaferro: "Pressure in certain diseases of the uterus;" also, "The prevention of pregnancy."

The Board of Censors reported favorably upon the application for membership of Drs. Charles Boyd and A. B. Copeland, and recommended the acceptance of the resignations of Drs. Geo. M. McDowell, B. F. Chambliss, J. C. C. Blackburn, J. E. Cook, B. F. Rudisill, T. J. Collier, and E. Fitzgerald. Adopted.

Drs. D. H. Howell, L. G. Alexander, W. A. Camp, Atlanta; and A. C. Perry, Covington, applied for membership.

Referred, under the rules, to the Board of Censors.

Dr. W. T. Goldsmith presented a voluntary communication, entitled, "The pith of the corn-stalk as a uterine tent —general remarks upon the use of tents."

The reading of regular reports and voluntary papers being called for, Dr. B. R. Dostor proceeded to read the report of the section on Surgery for the Second Congressional District, already read by title.

Dr. George J. Grimes read the paper reported by him from the section on Practice for the Fourth Congressional District.

The Board of Censors reported favorably upon the applications for membership of Drs. D. H. Howell, L. G. Alexander, W. A. Camp, and A. C. Perry. Adopted.

Dr. T. F. Walker read the report of the section on Practice for the Third Congressional District, announced by title.

The Secretary read a note from Dr. J. R. McAfee, expressing regret at his inability to present a report from the section on Practice for the Seventh Congressional District.

Dr. A. A. Smith presented, as the report of the Section on Surgery for the Third Congressional District: "A case of wound of the abdomen, with protrusion of the vis-

cera. Treated successfully." Also, "Two cases of hemorrhoids, treated by ligature and nitric acid."

Dr. James B. Baird read the voluntary paper reported by title.

During the discussion of the paper just read, Dr. A. Means, by request, took the floor. He reviewed the history of electricity from the date of discovery to the present time, and indorsed it as an invaluable therapeutic agent.

The Association then adjourned until ten o'clock Thursday morning.

SECOND DAY—MORNING SESSION.

The Association met pursuant to adjournment, and was called to order by the President.

The Minutes of the first day were read and confirmed.

The Secretary announced the reception of letters from Drs. W. W. Twitty and Eugene Foster, regretting their inability to be present.

He also presented a letter from Dr. A. P. Van Derveer, of Montgomery, inclosing his credentials as delegate from the Medical Association of the State of Alabama to the Medical Association of Georgia. He expressed disappointment at his Providential detention, and regret at his inability to attend the meeting.

Dr. John W. Moorman, of Charleston, Missouri, was introduced to the Association by Dr. L. G. Alexander, and was invited to a seat on the floor.

The following voluntary communications were presented by title:

Dr. W. G. Drake: "Sloughing of the uterus."

Dr. J. B. Roberts: "Obstinate case of hiccough."

Dr. J. G. Hopkins; "Remarkable case of gunshot wound of the spine."

The Secretary read a communication from Dr. W. A. Greene, in which he stated that, at a convention of the physicians of the State, at Macon, in 1871, he was elected Treasurer. After paying all claims against said convention, a balance was left in his hands. This balance he lent to a friend. The friend turned out to be insolvent, and has since left the State. He appealed to the Association for instructions, and proposed, if the Association so decreed, to become personally liable for the amount to the Treasurer of the Association.

On motion of Dr. S. H. Stout, the communication was referred to a special committee of three. Drs. S. H. Stout, P. H. Wright, and W. A. Love, committee.

The Treasurer asked the appointment of a committee to audit his books. Drs. P. H. Wright, Jas. F. Alexander, and J. D. Martin, committee.

Drs. J. C. Olmsted and W. L. Sterling, Atlanta, and J. D. Nash, Jonesboro, applied for membership.

Referred, under the rules, to the Board of Censors.

By Dr. W. R. Burgess:

Resolved, That a committee of seven members of this Association, two at least of whom shall reside in Atlanta, be appointed to memorialize, and use all possible effort with the next Legislature in securing the enactment of a law providing proper compensation for all expert services in the courts of this State.

Adopted.

Drs. W. R. Burgess, A. W. Calhoun, J. P. Logan, Robert Battey, J. C. LeHardy, A. Sibley Cambell, and George J. Grimes, committee.

The applications for membership by Drs. B. F. Shafftal, Savannah, and J. O. Perkins, Atlanta, were referred, under the rules, to the Board of Censors.

Dr. Charles Rauschenberg read the paper reported by title on the first day.

The Board of Censors reported favorably upon the applications for membership of Drs. J. C. Olmsted, W. L. Sterling, J. D. Nash, B. F. Shafftal, and J. O. Perkins. Adopted.

By Dr. W. B. Wells:

Resolved, That a section on ophthalmology and otology be created.

After discussion, the resolution was withdrawn.

Dr. V. H. Taliaferro renewed the motion of Dr. W. B. Wells for the establishment of a section on ophthalmology and otology.

The chair decided the motion in conflict with the by-law creating and regulating the various sections, and ruled it out of order.

Dr. Taliaferro then offered the following:

Resolved, That the by-laws be so amended as to constitute a section on ophthalmology and otology for the different congressional districts.

On motion of Dr. Jas. B. Baird, the resolution was laid on the table.

The hour of noon having arrived, Dr. W. R. Burgess proceeded to deliver the annual oration before the Association. [Appendix.]

The regular order of business was resumed.

By Dr. A. W. Griggs:

Resolved, That the thanks of the Association be, and are hereby, tendered Dr. W. R. Burgess, for the chaste and appropriate address just delivered before this body.

Adopted.

The following invitation was read and accepted.

The Committee of Arrangements, in behalf of the physicians of Atlanta, cordially invite the members of the Medical Association of Georgia, to attend a banquet at Concordia Hall this evening, at 9 o'clock.

THURSDAY, April 18, 1878.

The Auditing Committee, Dr. P. H. Wright, chairman,

reported that they had examined the books of the Treasurer, and found them entirely correct. Adopted.

The Association then adjourned until three o'clock.

SECOND DAY—AFTERNOON SESSION.

The Association was called to order at three o'clock, by the President.

A paper by Dr. H. Gaither, on "Eclampsia," in the absence of the author, was read by the Secretary.

Dr. W. A. Love read a voluntary communication presented by title on first day.

The following invitation was read and accepted.

OFFICE OF HUNT, RANKIN & LAMAR,
WHOLESALE DRUGGISTS.
CORNER DECATUR AND NORTH PRYOR STREETS,

Dr. Raines: ATLANTA, GA., April 18, 1878.

The gentlemen of our house beg to extend, through you, an invitation to the Medical Association of Georgia, and visiting friends from other States, to attend a reception at our store this evening, at half past five o'clock. Very respectfully,

CHARLES H. GREENE,
With HUNT, RANKIN & LAMAR.

Also, an invitation from his Excellency, Governor A. H. Colquitt, to a reception at the Executive Mansion, at 9 o'clock on Thursday evening, which was accepted with the thanks of the Association.

The Secretary also read invitations from Dr. Jno. Stainback Wilson, to visit his Turkish Bath establishment; and from Mr. Consignay, to visit his Pavilion on Wall street, and witness his pedestrian performance. Received.

Dr. A. W. Griggs read his paper, already reported.

The President announced the Nominating Committee as follows:

Drs. W. B. Wells, C. W. Long, P. M. Tidwell, A. A. Smith, P. H. Wright, J. B. Roberts, W. W. Fitts, A. W. Griggs, Thomas H. Kenan, A. Sibley Campbell, W. T. Hollingsworth, F. L. Wisdom, T. L. Lallerstedt, W. M. Charters, W. B. Tackett, T. A. Chappell, B. R. Dostor, S. H. Stout, E. H. Richardson, Jr., J. G. Slappey, G. J. Grimes, T. M. Shaw, W. S. Kendrick, J. T. Banks, John Thad. Johnson, J. W. Lambert, J. E. H. Ware, M. P. Deadwyler, J. W. Bailey, L. G. Hardman, T. W. Sims, F. R. Calhoun, I. M. Goss, W. W. Evans, and K. P. Moore.

Dr. W. A. Love read a synopsis of his paper on "Saccharated medicines."

The Association then adjourned until ten o'clock Friday morning.

THIRD DAY—MORNING SESSION.

The Association met pursuant to adjournment, and was called to order by the President.

The minutes of the second day were read and confirmed.

The President announced the absence of Dr. John Thad. Johnson, member of the Nominating Committee, from Fulton county, on account of sickness. As no objection was made, he appointed Dr. W. A. Love to fill the vacancy.

By Dr. W. G. Drake:

Resolved, That a committee of three, or more, be appointed by the chair to consider the propriety of so amending the by-laws of the Medical Association of Georgia as to make all elections for officers either by ballot or *viva voce,* and that they report at this meeting.

The resolution was amended by striking out "three or more," and inserting "seven."

As thus amended, it was adopted by ayes, 55; nays, 1.

The negative vote was then changed, making its adoption unanimous.

Drs. W. G. Drake, W. R. Burgess, Robert Battey, G. G. Crawford, Jno. D. Martin, A. Sibley Campbell and W. F. Westmoreland, committee.

Applications for membership from Drs. T. W. Dean and A. J. Pinson, Atlanta; J. T. Moore, Whitesburg, and J. W. Griggs, West Point, were referred, under the rules, to the Board of Censors.

The Committee on Nominations announced that they were ready to report.

Dr. T. F. Walker moved that the report be received and read. Adopted.

Dr. H. V. M. Miller moved that the report be laid on the table. Adopted.

Dr. J. C. LeHardy moved that the report be taken up. Lost. Ayes, 1; nays, 17.

Dr. Hiram Smith, chairman of the committee appointed to memorialize the Legislature for the removal of the special tax upon physicians, reported by submitting the draft of a memorial to the General Assembly, setting forth the reasons why the specific tax referred to is onerous, unjust and should be repealed, and by offering the following resolutions for the purpose of perfecting the work of the committee:

Resolved, That a local committee of five members be appointed, whose duty it shall be to see that the memorial is properly presented to the Legislature, and that the committee be empowered to designate one or two of their members to superintend its passage through the House and Senate by appearing in its behalf, before any committees of the General Assembly to whom it may be referred, and by taking such steps to secure its passage as their judgment may dictate.

Resolved, That one physician from each congressional district be appointed, whose duty it shall be to exert his influence with the State

Representatives in favor of the repeal of the law imposing the tax.

Adopted.

Drs. F. King, John M. Johnson, W. F. Westmoreland, C. A. Nutting and C. A. Simpson, local committee.

Drs. W. M. Charters, B. R. Dostor, T. F. Walker, A. W. Griggs, J. G. Westmoreland, C. H. Hall, C. P. Gordon, W. H. Doughty and R. M. Smith, general committee.

The committee to whom was referred the communication of Dr. W. A. Greene, reported that—

In the opinion of your committee, the explanation made by Dr. Greene touching the subject to which he refers, is entirely satisfactory.

S. H. Stout,
W. A. Love,
P. H. Wright,
Committee.

Adopted.

The Board of Censors reported favorably upon the applications for membership of Drs. A. J. Pinson, T. W. Dean, J. T. Moore and J. W. Griggs.

Dr. W. F. Westmoreland made a verbal report of a voluntary paper on "Congenital phimosis with adherent prepuce."

By Dr. S. H. Stout:

Resolved, That all reports of cases presented to the Association shall be written and filed with the Secretary, to be read at the pleasure of the Association. That when members propose to report cases to be afterwards submitted to the Committee on Publication, a synopsis of such cases shall be presented in writing—verbal reports of cases being hereby forbidden.

Adopted.

The committee appointed under the resolution of Dr. W. G. Drake, to consider the propriety of changing or amending the by-law regulating the mode of nominating officers of the Association, reported:

That in their judgment, the existing by-law gives just and proper

voice in this matter to small delegations in the Association, which should not be withdrawn from them ; and as the by-law now gives ample revisory power to the body of the Association, we feel that the interest of the large delegations is properly cared for. We, therefore, unanimously recommend, that the by-law remain unaltered.

W. G. DRAKE,
W. R. BURGESS,
ROBT. BATTEY,
G. G. CRAWFORD,
J. D. MARTIN,
A. S. CAMPBELL,
W. F. WESTMORELAND,
Committee.

Adopted unanimously.

Dr. E. J. Roach moved that the report of the Nominating Committee be taken up and read. Adopted.

The Secretary then read the report, as follows:

For President—Dr. John Thad. Johnson.

For 1st Vice President—Dr. William F. Holt.

For 2d Vice President—Dr. Thomas H. Kenan.

For Secretary—Dr. James B. Baird.

For Treasurer—Dr. William R. Burgess.

For Censor—Dr. Robert Battey.

[For the remainder of the report, annual committees, sections, etc., see pages six and seven.]

Adopted unanimously.

By Dr. B. R. Dostor:

Resolved, That the Publishing Committee be requested to take such course in the publication of the Transactions of this Association, as they may find most economical and efficient in making them generally known to the medical profession.

Adopted.

Dr. A. W. Calhoun read his paper, reported by title on the first day.

On motion, the paper reported by Dr. W. G. Drake was called up and read.

Dr. Robert Battey, by his request, was excused from serving on the Board of Censors to which he had just been chosen, on the ground that a service of five years on the Board terminated with the present session, and that he was consequently averse to an immediate re-election.

The chair was authorized to nominate a suitable person to fill the vacancy thus occasioned, the name of the nominee to be presented for confirmation to the Association.

The President nominated Dr. G. W. Holmes, of Rome, as Censor for five years, and he was unanimously confirmed.

Dr. W. T. Goldsmith read his paper on uterine tents. He also exhibited, as illustrative of his thesis, tents made from the pith of the corn stalk, and described the method of their manufacture.

Dr. J. B. S. Holmes proposed Rome as the next place of meeting, and it was unanimously selected.

On motion, the Association adjourned until three o'clock.

THIRD DAY—AFTERNOON SESSION.

The Association was called to order at three o'clock, by the President.

The title of a voluntary communication on "The tar bandage," by Dr. C. B. Leitner, was announced.

The Secretary read a communication addressed to the Association by Hon. B. H. Bigham, of LaGrange, relative to the care of insane persons by the State. He commended the act of the last Legislature, directing an investigation for the purpose of ascertaining the number of lunatics, idiots and epileptics in Georgia, and thought that good to this unfortunate class of persons would result therefrom. He

deplored the refusal of the same Legislature to appropriate funds sufficient to sustain the State Board of Health, and accounted for this action on the ground of a general demand for retrenchment in the public expenditures, which, like all popular cries, had some basis, but was too indiscriminate.

By Dr. V. H. Taliaferro:

Resolved, That the memorial of Judge Bigham be referred to a committee of three, and that the committee be instructed to present the subject set forth in said memorial to the attention of the next Legislature.

Adopted.

Drs. V. H. Taliaferro, Robert Battey and T. S. Powell, committee.

The resignation of Dr. J. J. Knott as a member of the Association was read and referred, under the rules, to the Board of Censors.

The President announced the following list of delegates to the American Medical Association, at its approaching meeting in Buffalo:

Drs. J. G. Thomas, Jno. D. Martin, J. C. LeHardy, Robert Battey, W. F. Holt, H. F. Campbell, G. G. Crawford, A. W. Calhoun, S. H. Stout, Thomas W. Raines, W. F. Westmoreland, Robert Eve, Jas. B. Baird, F. A. Stanford, George J. Grimes, T. H. Kenan, P. L. Hillsman, J. E. Blackshear, Geo. F. Cooper, D. Taylor Johnson, A. Means, A. W. Griggs, B. R. Dostor, R. M. Smith, J. P. Logan, John M. Johnson, T. S. Powell, John S. Coleman, DeS. Ford, H. Smith, V.H. Taliaferro, W. B. Wells, T. S. Hopkins, R. J. Bruce, C. W. Long, R. F. Wright, J. B. S. Holmes, F. R. Calhoun, J. R. McAfee, Charles Rauschenberg, J. W. Bailey, W. G. Drake, C. A. Simpson and L. G. Alexander.

On motion, Dr. W. O'Daniel was added to the delegation.

Dr. John Thad. Johnson chairman of the Section on Surgery for the Fifth Congressional District, presented by title the following papers:

"Report of a case of peri-typhilitic abscess;" "Retention of urine from an unusual form of stricture;" and "What is the true value of caustics in the treatment of venereal ulcers." He also announced by title, "Report of a case of gun-shot wound of the brain, in which the ball remained four years without symptoms in the substance of the brain." By Dr. S. H. Gray, Forsyth. Specimen accompanied the report. "An osteo-cartilaginous tumor removed from the knee-joint." By Dr. C. L. Summey, Stone Mountain. The tumor was presented for inspection. The report was published in the *Atlanta Medical and Surgical Journal*, April, 1877. "Case of adherent prepuce the cause of convulsions, with marked opisthotonos; relief by operation." By Dr. Paul Faver, Fayetteville. "Large calculus removed from a female bladder by dilatation of urethra, without unpleasant consequences." By Dr. J. T. Banks, Griffin. The calculus exhibited was heart-shaped and flattened, measuring one and three-quarters of an inch in length, one and one-half of an inch in its greatest breadth, three-quarters of an inch in thickness, and four and a quarter inches around its margin. "Laceration of a pregnant uterus by injury; escape of the fœtus (of four and a half months); death." By Dr. J. L. Stephenson, Griffin. "Cockle-burr remaining in the lung twelve years, and finally causing death." By. Dr. T. R. Whittley, Douglasville.

Dr. James B. Baird, by request, exhibited the different forms of electrical batteries employed in the treatment of

disease, and explained briefly the several currents, the indications for their use, and the management of the instruments.

Dr. W. A. Love reported by title "A case of lateral version of the uterus, caused by wearing, for eighteen months, a glass globe pessary two and a half inches in diameter, (seven and one-eighth inches in circumference.) Difficulty of its removal because of being imbedded in an adventitious cavity. Subsequent treatment and successful results."

The Board of Censors reported favorably upon the acceptance of the resignation of Dr. J. J. Knott. Adopted.

The President announced the Committee of Arrangements as follows: Drs. Robert Battey, J. B. S. Holmes, G. W. Holmes, T. J. Word, W. D. Hoyt, William Farrell, and J. M. Gregory.

Dr. E. H. Richardson, Jr., of Cedartown, was appointed orator.

By Dr. A. Sibley Campbell:

Resolved, That this Association hereby returns its hearty thanks to the medical profession of Atlanta for their cordial greeting, generous hospitality and unremitting attentions during our pleasant sojourn in their delightful city.

Resolved, That we take especial pleasure in tendering our grateful thanks, also, to the citizens of Atlanta, who have, by their kindly welcomes in their hospitable homes, placed us, as individuals, under so many obligations.

Resolved, That we feel ourselves especially indebted to his Excellency, Governor A. H. Colquitt, Dr. John M. Johnson, and Messrs. Hunt, Rankin & Lamar for their very kind and marked attentions to our body.

Resolved, That our thanks are due, and are hereby tendered, the various railroads leading to Atlanta for courtesies extended to the members of this Association.

Resolved, That we tender our thanks to the Superintendent of Public Works for the use of the Senate Chamber during this session of the Association.

Resolved, That our thanks are hereby tendered to the *Atlanta Constitution*, and to the press generally, for full and favorable notices of our meetings.

Resolved, That the Secretary be instructed to forward a copy of these resolutions to the various persons and bodies mentioned therein, to whom we would thus, though in a feeble manner, give utterance to the sincere emotions which arise in our hearts in this the closing hour of our twenty-ninth annual session.

After a brief farewell address by the President, the Association, on motion of Dr. G. G. Roy, adjourned to meet in Rome on the third Wednesday in April, (16th), 1879.

WILLIAM O'DANIEL, *President*.

JAMES B. BAIRD, *Secretary*.

APPENDIX.

APPENDIX.

PRESIDENT'S ADDRESS.

DELIVERED BEFORE THE MEDICAL ASSOCIATION OF GEORGIA.

BY W. O'DANIEL, M. D., BULLARDS.

Gentlemen of the Medical Association of Georgia:

Ever since the organization of this Association, it has been the custom for the President elect to deliver an inaugural address upon assuming the duties of his office.

To-day, gentlemen, the performance of this duty devolves upon me, and I assure you that it is with diffidence that I commence it; not because of any indisposition on my part to comply with former usages, but because of a fear that I shall fail to offer you anything of material interest.

You know how exceedingly difficult it is, in these days of rapid progress, to present topics entirely new; indeed, it has been said, "there is nothing new under the sun."

We have, therefore, concluded to submit for your consideration a few suggestions, which we deem of practical importance to the medical profession and to this Association. We beg your indulgence for our many shortcomings, and imperfect ideas. We indulge the hope that nothing may arise to disturb the peace, harmony and best interests of this meeting in the slightest degree, and that every one will devote his best energies to the advancement of scientific knowledge.

It is with pleasure, gentlemen, that I congratulate you

upon this twenty-ninth annual convocation of the Medical Association of Georgia. Some of you had the honor of being present at its organization twenty-nine years ago, I believe, in the city of Macon.

What a pleasure it should be to you to know that your labors have not proven fruitless, but that they have been crowned with imperishable success. What a source of gratification it should be to you to know and to note the progress and advancement made in medical science in Georgia even since your organization.

Your first President, though far advanced in age, and equally so in medical learning, to-day lives, in the venerable and distinguished personage of Dr. Lewis D. Ford, of the Medical Department of the University of Georgia. The second medical lecture which we ever had the pleasure of listening to was delivered by him; and, doubtless, many of you have enjoyed his eloquence and witnessed his labors as a medical teacher. He is, to-day, a living monument of the medical profession of Georgia. May he continue to live and to work for the profession of his youthful selection; for his labors are worthy of emulation, and will be pleasantly remembered long after his earthly mission shall have been completed.

You can justly and truthfully attribute many of the additions thus made to the science of medicine to your earnest labors.

True, they have been arduous and continuous, but they have been labors of love and delightful research.

True, many of you have burned the midnight taper in search of some remedial agent, or surgical appliance, whereby to soothe and palliate the ills of the suffering, while the non-professional, or those, at least, not engaged in scientific investigations, were quietly and peacefully folded in the

arms of Morpheus, enjoying nature's sweet repose. Frequently you have thus labored without reward, or even the hope of reward; but labors so bestowed are pleasures and the hours are well spent, never to be regretted by those who are trying to climb to the highest pinnacle of professional fame, with high hopes and aspirations before them.

What a pleasure to suffering humanity, and what a pleasure, too, it should be to the scientific physician to be able to relieve the many ills of his fellow-creatures, varied and changeable as they are.

We have no doubt that frequently we subserve the very purposes, and perform the very labors intended for us by the great and immaculate Physician above—the Physician who shapes our destinies for us. "*Acti labores jucundi.*"

He who labors alone for pecuniary reward, or the hope thereof, will never add much to science, and wealth thus sought, should he ever be so fortunate as to obtain it, even though it be equal to that of Crœsus himself, will be a source of annoyance and trouble rather than of real pleasure and enjoyment, for *ante tubam trepidat.*

If there is anything upon the face of the earth that approximates in the slightest degree the christian religion, it is the medical profession, honestly and conscientiously practiced; they should go hand in hand in health, and when we are called upon to pay the last debt—to cross the dark, deep and lonely Jordan of death—whom, next to our spiritual adviser, had we rather commune with, confide in, and cast our tearless and inexpressive eyes upon for the last time? We answer, the skillful, honest and sympathetic physician.

It is with pleasure that we sometimes leisurely refer to the membership of our Association, numbering nearly six hundred, among whom are some of Georgia's brightest intellects, who are diligently striving, by day and by night, to

improve upon the knowledge and the theories advanced by Wm. Gordenio, the first person, it is said, upon whom the title of M.D. was ever conferred, at the College of Asti, in 1329, and upon the theories of Æsculapius, Galen, Hypocrates, and a host of others, whose names we to-day revere and profoundly respect.

Again, it is with inexpressible sadness and sorrow that we refer to the list "In Memoriam." Many, since your organization, have commenced the long and lonely sleep that knows no waking—have gone to that "undiscovered country from whose bourne no traveler returns."

We can do nothing more for them than to garnish their sepulchres and water the flowery ornaments of their last resting places with tears of affection and sympathy, and to speak words of comfort and consolation to the loved ones left behind. Eulogies upon them are now unnecessary. *Requiescat in pace.*

We cheerfully and willingly realize the fact, that it is the duty of the physician to give in charity by administering to those unable to compensate him for his services; but we are unable to see any good reason why he is under obligations to this class any more than the grocer or the dry goods merchant.

If we only had to give in charity our professional services to those impecunious and unable to compensate us, we would never murmur. But not so; we are frequently called upon to extend such charities to those better off, so far as this world's goods are concerned, than ourselves; to those who fare sumptuously every day, and live the lives of aristocrats, so-called; to those, for instance, who visit fashionable watering places, dress themselves and their families elaborately and expensively, and partake frequently of palatable and costly beverages, which exhilarate, and sometimes

intoxicate to madness, at the expense of the hard-worked, and frequently poverty-stricken, physician.

We must charge this to the indiscretion, and a want of thorough organization, of the honorable profession in which we claim membership. It is mainly our fault, and we cannot deny it.

It is a duty we owe to ourselves, to our families and to our profession, to exact adequate compensation from those able to pay; and if they refuse, or prove themselves delinquents, without a good and reasonable excuse, we should unhesitatingly withhold our services from all such. And if our professional brethren persist in continuing to labor for them, after having been notified of their arrearages to other physicians, and their refusal to pay, we should deny all such violators of ethical law professional recognition.

This is the only course to pursue, in our opinion, by which we can regulate those who violate professional etiquette and and medical ethics with impunity.

Leave them at sea without chart or compass, and they will soon acknowledge themselves in error, and willing to knock at the door of medical ethics for admittance.

It ought not to be expected of us to spend a whole life of physical and mental labor in organizing an eleemosynary corporation.

We should estimate our services properly, and demand just pecuniary compensation.

The harmonious and universal adoption of this rule, by all reputable and regular physicians, would result in our pay being as sure as that of the grocer, the dry goods merchant or the day laborer.

I regret to occasionally find one who denies the real and true progress of American medicine.

He who takes the pains to familiarize himself with the

current medical literature of the day, can very readily perceive that this is a wonderfully progressive age, and that in practical knowledge American physicians are, at least, the equals of any in the world. Yea, we think we have the most practical and successful surgeons and gynæcologists in the world, among whom are our own Sayre and Sims.

We can think of many in our own State of whom honorable mention should be made, but we will desist now, for fear of invidious distinction.

We think we see progress and reform indelibly inscribed upon everything that pertains to American medicine.

American physicians should be proud of their medical journalism. It not only reflects credit upon those actually engaged in that laudable pursuit, but reflects great credit also upon the medical profession at large. Almost every State in the Union, so far as I know, is represented in medical journalism, and creditably, too.

In order, then, to keep the wheels of progression and reform in successful operation, it is our duty to work—work, first of all, for the elevation of medical education; work for the maintenance of medical ethics; and work for the honor and dignity of the medical profession.

In order to work successfully for the elevation of medical education, we should commence at our offices.

We should never encourage any young man to commence the study of a profession so difficult, so abstruse in all of its minutiæ, without the proper preliminary preparation.

It should be the duty of preceptors to send such a class of students from their offices to medical colleges, as to leave no doubt upon the minds of medical college faculties as to the qualification of students presenting themselves for matriculation.

Indeed, the mere mention of a regular and reputable

physician as preceptor, should be *prima facie* evidence of the proper preliminary qualifications and competency, in every way, to discharge the grave responsibilities which the applicant desires to assume.

Many incapable young men could be dissuaded from an undertaking of such doubtful propriety, to say the least of it, until the requisite proficiency had been attained by proper preparation before commencing the study of medicine.

This is a plain duty, one which we conscientiously owe to unqualified students, one which we owe to the medical profession, one which we owe to the medical colleges of the country, and last, but by no means least, do we owe it, especially, to the poor, unsuspecting victims of these incompetent aspirants for professional honors.

We should work diligently for the maintenance of ethical law, which is always supposed to be reasonable and just; for we would denounce at once, and place forever the seal of condemnation upon any rule or regulation so oppressive, compulsory or coercive in its nature as to make compliance with it a hardship; but such is scarcely ever the case.

It is absolutely necessary that we have laws for the government of our institutions, and that they be enforced, or the tendency will always be to evil, degradation and disgrace of the institution, no matter whether it be medical or otherwise.

In doing this, gentlemen, we work for the perpetuation of the honor and dignity of one of the noblest professions upon the face of the earth. By doing this, we command the respect and esteem of every lover of science, no matter whether he belongs to the medical profession or not—no matter whether he be an American, or whether he be separated from us by the fathomless ocean.

It is incumbent upon us, as a profession, to preserve our own honor and self-respect, and that of our institutions, if we expect to deserve and to win the patronage and esteem of the non-professional.

Now, a word in regard to our State Board of Health, and I have done. You all know that there is in Georgia an organized Board of Health, but the appropriation is so meagre and insignificant that it is totally insufficient to make it operative or effective.

We think it is the duty of this Association to endorse the labors of the Board, which has done much, we think, of incalculable interest to the State in commencing the work of collecting vital statistics, and this, too, without the slightest pecuniary compensation, save actual personal expenses, and, in many instances, they were not defrayed, because of a want of funds in the Treasury, appropriated for that purpose.

We think it the duty of this Association to appoint a committee from its body to memoralize the next General Assembly for an incrased appropriation, and the perfection of the present bill creating the Board, so as to make it efficient.

We feel confident that if the facts are properly presented, and the past labors of the Board made known, and the probable good which we expect to result from the continuance of the Board, (which can only be done by an increased appropriation) our prayers will meet a satisfactory response.

The existence of a Sanitary Board in successful operation in Georgia, will indicate a higher state of civilization, and will enhance the best interests of our State in many respects; much more, in our opinion, than the required appropriation to make it what it should be.

This, I think, has been satisfactorily demonstrated in the old world, as well as in many of the States of this Union, in which such Boards exist.

The epidemics of yellow fever in the cities of Savannah and Brunswick, only a short time ago, should stimulate us to renewed energy in this direction.

It is thought by many medical gentlemen, eminent in the profession, that if a proper regard had been paid to State sanitary medicine in the past, the terrible yellow fever scourge might have been prevented, or, if not prevented entirely, so checked as to have rendered its ravages less hurtful to life and property.

It is the duty of a State to protect the lives and property of her citizens by enacting proper hygienic and sanitary laws for the amelioration and prevention of epidemic, endemic, contagious and infectious diseases, and to make ample appropriation for the enforcement of the laws in such a manner as to render them operative and efficient.

Look at the beautiful city of New Orleans. Many of you remember when that city was frequently visited by yellow fever epidemics, horrible to think of, much less to experience.

But not so now. That city is known to be comparatively free from it, and the cause of such freedom is mainly attributable to the continuous labors of an intelligent and well organized Sanitary Board.

Ample provision has been made by the State of Louisiana, giving the Board of Health plenary power over that department of the State, and the result has been worth untold wealth to that State, and especially to the great southern city.

Now, gentlemen, allow me to thank you most kindly for the distinguished honor which you have conferred upon me by making me your presiding officer.

I wish that I had language to express my gratitude, but language with me is totally inadequate to the undertaking.

ANNUAL ORATION.

DELIVERED BEFORE THE MEDICAL ASSOCIATION OF GEORGIA.

BY WM. R. BURGESS, M. D., MACON.

It was the pleasure of your worthy retiring President, at the last session of this body, to honor me with the appointment of orator for this occasion. To assure him and you that I appreciate the compliment, I am here, to-day, to discharge, as best I may, my obligation to the honorable trust.

But, as I am no "eagle-tongued" orator, I would not presume to enter upon his domain. I will, therefore, simply ask you to bear with me for a short time, that I may tell you what I think of

HASTY, UNWISE AND UNFORTUNATE MEDICAL LITERATURE.

I am not unmindful that the discovery and development of facts, as a rule, require thought, investigation, comparison, experiment, study; and these several factors combining for the elimination of truth, must sometimes be written and re-written many times, in order that the necessary amount of thought, investigation, comparison, experiment, study, etc., may be instituted. But when the work of these has been accomplished, and a grand and unmistakable truth has been evolved beyond doubt or controversy, no reader, I presume, feels that his time has been lost or his weary brain taxed in vain, if, at the end of much reading, he finds that he has been safely and surely conducted to this hitherto undiscovered treasure. But, *per contra*, if he spends time, at the expense of both body and mind, and these, perhaps,

already worn from overwork, to find, at the end, that he has only been tracing the speculations of an imaginary brain—much more gifted in the theoretical than the practical—without having gained a single idea that he esteems of value, it is indeed a disappointment, if not a positive vexation.

It is quite evident that the field of *undiscovered treasures* holds among its valuables much for the profession of medicine that may only be obtained by patient inquiry, and industrious research; for by these alone has it, in the past half century, been able to add so much to its armamentarium of positive and valuable truths. To accomplish this, as already stated, it is necessary to experiment, compare, etc.; but let this be done quietly at the office, until the truth stands forth unmistakably proven, before a line goes forth to the reading world. Having accomplished the good work of making an important discovery, then it becomes not alone the privilege, but the imperative duty, of the author to give it the widest circulation possible among the readers of the literature of his profession.

It is not for the purpose of condemning that I have seen fit to select this question for the subject of what I may say at this time. Indeed, I esteem myself in no way capable to decide between the meritorious and the valueless; but I would very modestly ask attention to what appears to me to be a fact, to-wit: that very much is written and published by the medical press without having previously been subjected to the proper test.

To illustrate: Dr. A. is called to see Mr. B.'s child, suffering with throat trouble; may be, simply catarrhal, with some mucus spread over the tonsils, or aphthæ scattered here and there on the mucous surface. His diagnosis is hurriedly

made, and he treats, to his entire satisfaction, a genuine case of diphtheria. His next work is to make known, as speedily as possible, his wonderful discovery for the successful management of this fatal malady. Or, admitting that his diagnosis is correct, and the result of treatment such as has been suggested, with this isolated case from which to reach his conclusion, how is he to determine whether it was a *post* or a *propter hoc* result? It would be well to bear in mind the fact, that few men do their own thinking, and are, consequently, mere copyists. Members of the medical profession constitute no exception to this rule, and it is with this class that conclusions, hurriedly reached, are particularly calculated to mislead and do harm. The temptation to follow in the steps of those who have been successful, is quite hard to resist; indeed, we do no wrong in such following, provided we have chosen a prudent and competent guide; but of this we should be quite sure before we consent to take the first step. If we do not, it is not improbable that some day will find us in position to repent most heartily for having followed, too confidently, the teachings of a hasty writer.

The responsibility of looking after and directing the management of the sick is, in my opinion, weighed too lightly by very many physicians. Before deciding that recovery from disease resulted from drugs administered under his direction, and sending forth this conclusion to be caught up by those who are ever watching for "something new," he should carefully and thoroughly apply the test of frequent trial in the same class of diseases until there can be no doubt remaining.

A misfortune for the learned of the profession is the fact that the country is full of the veriest pretenders, who claim to represent medicine in its legitimate bearings. And another misfortune is the additional fact that, throughout the

country, with much of the populace, the term "Doctor" is quite sufficient to admit to confidence, even if the only evidence of the genuineness of this title is derived from the presumption of the adventurer himself. This class of self-constituted doctors are entirely without the pale of the profession, and with them we have nothing to do, save as humanitarians who would shield their fellow-men from the dangers of the indiscriminate and incompetent administration of poisonous drugs, as they would guard him from contact with a poisonous serpent. It is the law-makers of the land who are responsible, and upon whom the odium must rest.

But there is a class of practitioners—very clever fellows, too—who, in their honest hearts, believe all others honest; and, consequently, are willing to take the mere *ipse dixit* of any plausible writer, no matter how delusive may be his teachings. For instance: Dr. D., of Georgia, reads an article, in some respectable journal, of the remarkable success of Dr. F., of Arkansas, in treating intermittent fever with gelsemium. He at once determines to make the test. Why? Because it meets the approbation of his judgment? No; he has no judgment in the matter, whatever; but simply because Dr. F. says so. His first opportunity for the test offers. His patient, we will say, has had two seizures of chills on successive days. His prescription is gelsemium at certain intervals until his return, with perhaps the assurance that no further trouble will be experienced.

But what must be his disappointment and chagrin, on the morrow, to find that the daily attack had anticipated its usual time by some hours, and his patient has passed into a state of congestion, from which recovery is not to be expected. Doubtless, his old friend, quinine, would have given him a different and more satisfactory result. This simply

illustrates, in a small way, the evil that may attend the emphatic expression of opinion when such opinion is based upon insufficient test. Now, that jessamine is a good remedy, there is no doubt, and it is good in intermittent fevers, but not as taking the place of the cinchona preparations. The effect of such disappointment is two-fold. First, the disastrous results; and again, the disappointed physician turns aside, perhaps for all time, from what, under different circumstances might satisfy his fondest hope.

It is altogether too common a practice for physicians to write in a manner parallel to what I have described; their only evidence being based upon one or two cases, perhaps uncertainly diagnosed, or if not, there is no proof that these cases would not have recovered without the aid of any form of treatment.

Let the profession work earnestly for the discovery of hidden facts.

In the department of medicine or remedial agents, the whole universe is one vast laboratory filled with invaluable supplies; and though the laborers be numerous, the work is altogether too great for immediate solution—if, indeed, we may not question the possibility of its ever being accomplished. Therefore it is reasonable to hope and to expect, by our earnest and diligent work, to be able to give to the world, now and then, something new and valuable.

As earnest, faithful workers, it is the duty of physicians, no less for the promotion of science than for the general good of man, to improve every opportunity to throw light on the dark things of the profession. But if we are to publish a discovery, or an improvement in what may have already been made known, let us satisfy ourselves very fully of the genuine merit of what we propose giving to the world, before we permit it to go forth. Or, if unable to satisfy ourselves fully,

and yet feel inclined to bring it to professional notice, in doing so, we should be perfectly honest, and while speaking of the good we believe it to possess, we should also admit the doubt that may rest upon our mind.

The danger that we claim as attaching to the hasty and premature publications of the medical press, in connection with the practice of medicine, is equally true with other branches of the profession—with surgery and gynecology. It is one thing to read of the splendid results attending a certain class of operations, and quite another thing for the inexperienced surgeon to attain these results by practical tests at the bed-side of the living subject.

Many a poor fellow has found himself in a most awkward dilemma—to say nothing of what may have befallen his patient—by attempting to carry into practical execution, the facile teachings of a Sims, a Battey, or a Thomas. Now, these gentlemen, together with many others, deserve all the honors that have been heaped upon them for thus blazing out the way for the more speedy relief and cure of suffering woman; and in their hands it is an easy matter to use the knife, the curette, etc., with as much facility as they write; but those who would be their followers, should tread very carefully this well-marked course, until, step by step, under the guidance of a tutor, they have acquired a familiarity with the whole schedule, before they undertake the engineering of an intricate case upon their own responsibility.

To deal fully with the question of unfortunate and unwise medical literature, would require a much more extended article than I propose taxing your patience with to-day. My hope is to awaken thought on the subject, and perhaps put on their guard some, and especially that class of journal

writers who care more for seeing their names brought into print than for adding light to the science.

For the general practitioner, the amount of reading necessary to keep abreast with the times, is immensely great compared with the limited time at his command in which to accomplish it. If, then, to this must be added, thousands of pages of mere trash, written solely for display, the imposition assumes proportions truly grievous.

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AMPUTATION OF THE LEG FOR NECROSED TIBIA OF THIRTY-FOUR YEARS' STANDING.

BY B. R. DOSTOR, M.D., BLAKELY.

Mr. C., aged fifty years, of strumous diathesis was brought to my office, March 29, 1877. He placed himself under my care, stating that he had been troubled, "off and on," with a sore leg for thirty-four years, and gave the following history: In 1843, at the age of sixteen, he had measles. Immediately after recovery, he was in the field, and was caught in a shower of rain whilst very warm. A profuse eruption of boils ensued; he took liberally of epsom salts "to dry them up," and as soon as the boils receded, he was seized with severe aching pains in all of his bones, particularly in the right ankle, extending up the spine of the tibia; the limb swelled rapidly, the soft parts ulcerated, and in a short time several pieces of bone were extracted, or came out, leaving a trench in front of the tibia. He was similarly affected in the left leg above the knee, in the left humerus, and in the sternum. Scars where pieces of bone came out mark these localities. All these healed, however, except the right leg, which continued to trouble him variably—sometimes it would nearly heal up, then break out again.

An examination revealed a deep excavated ulcer, involving almost the entire lower two-thirds of the tibia, covered with unhealthy granulations, discharging copiously a thin fluid of greenish color and extremely offensive odor, attended with a constant gnawing pain, which grew worse at night,

preventing sleep, unless deeply under the influence of opiates, and sometimes then the pain was so severe he had to sit up and bask it to the fire during the long, cold winter nights, to deaden the sensibility, thereby obtaining sleep for a short time, and gaining some respite from his intolerable sufferings. Sometimes severe hemorrhages occurred, even to syncope, and thus the loss of blood and sleep, and the constant severe pain, had nearly brought him to death's door. I told him amputation was the remedy. He readily assented, and whilst I did not consider his a very hopeful case, there were some features in it that gave me encouragement These were, strange to say, a good appetite and digestion, and he was hopeful and resolute. Gross says, in deciding so grave a question, "We must not lose sight of the fact that cases, apparently of the most forlorn character, where life literally hangs, as it were, by a thread, sometimes promptly recover upon the removal of a dead bone."

I, therefore, to prepare him for the coming ordeal, enjoined quietude, ordered astringents locally, to prevent hemorrhage, and disinfectants to correct fetor. I directed him to be placed upon a highly nutritious diet—rich milk, fresh butter and eggs, milk punch, etc. As a tonic, gave him half a grain of quinine and twenty drops of the tincture of chloride of iron, three times a day, and at night gave morphine and bromide of potassium to secure rest. Under this regime he built up rapidly, and was ready for the operation by the 16th of May, when, with the assistance of Drs. Alexander, W. M. & W. B. Standifer, the patient being chloroformed and Esmarch's bandage applied, I amputated the leg in the usual manner, only a little higher than the rule, on a line with the superior tibio-fibular articulation. I was forced on that line to get above the diseased bone, and he desired a stump below the knee, however short, so as to have an arti-

ficial limb. The soft parts, from long diseased action, were very vascular, and we had to tie ten or twelve arteries. Aside from a ligature that accidentally got pulled off, which was soon secured, he lost comparatively little blood. All the large nerves were drawn out and well retrenched, and as soon as he slightly recovered from the chloroform, I gave him an ounce of brandy, and administered a half grain of morphine hypodermically.

I left the flaps open an hour to glaze with lymph, and as there was no hemorrhage, closed them with sutures and applied dry cotton wool to the stump, secured by a roller bandage extending from the upper third of the thigh down, to control spasm of the muscles. He re-acted slowly, but, by the judicious use of brandy and opiates, his pulse gradually increased in volume, his skin warmed up, and he was as comfortable as could reasonably be expected under the circumstances.

The stump was again dressed in twenty-four hours. The cotton was substituted by patent lint, using moderately warm water, as this was most pleasant to him, medicated with carbolic acid and tincture of arnica. On the second day he took milk and soup, and, as his appetite increased, he was allowed more substantial food. When he grew stronger, and inflammation set up in the stump and joint, I used cold water dressings, and gave him five grains of quinine three times a day until the fever subsided, and opiates at night when necessary. The ligatures came away in due time, the stump healed up all right, and he has steadily gained flesh and strength, his cheeks are ruddy, he has no pain, he seems to have taken a new lease on life, and is apparently a happy man.

REPORT OF CASES.

BY T. F. WALKER, M.D., COCHRAN.

ABNORMAL CONCEPTION.

On the twenty-eighth of November, 1877, I was summoned by a gentleman three miles from my office to visit his wife, whom he assured me was in labor. I saw her at two o'clock P. M. sitting in a chair by the fire, doing some needle-work. She informed me that while asleep twelve hours before, she was somewhat frightfully awakened to find the membranes ruptured, and a considerable gush of amniotic liquor. Feeling no pain, and being the mother of one child, she concluded to await the pain before sending for me. At eleven o'clock, until which time the discharges were constantly dripping away, she observed the appearance of a sanious discharge, which impressed her that she was in close proximity to the finale. When I arrived, she still had the sanious discharge, with no pain, but complained of soreness in her muscular system; and I found everything as she had stated upon touching. The cervix indicated full term; the os dilated but little—about one-fourth of an inch. Feeling confident that labor would soon interpose, I concluded to wait. At ten o'clock P. M. I retired, as everything was *in statu quo*, with the injunction to call me upon the first appearance of any additional symptom. I was greatly surprised next morning to find that I had not only been undisturbed, but that my patient was up and clear of her soreness, and attending to her household affairs. I could but still feel confident that the symptoms indicated an early parturition, and left with the promise that I would promptly

be on hand when needed. I heard no more from her until the fourth of December, seven days after, when on arriving I found that she was now really in the first stage of labor, with the statement from her "that the blood had continued to flow slightly until her pain came on two hours ago." I felt extremely anxious for her safety, as the waters had so long been evacuated, and made every preparation for obtaining consultation if I should require it. My astonishment was immense when I found, upon examination, a well-developed bag of waters, with the os dilated to size of a silver dollar. I could not explain the condition with any satisfaction to my mind. The lady could not have deceived me, for I witnessed the symptom myself. If it could have been twin conception, where was the product of the ruptured membrane? It should have been in advance of this one.

Without speaking of the unnatural phenomena, I awaited with great interest the solution of what seemed unaccountable to me, and I must admit that I could not divest my mind of some misgivings as to the final disposition of the case.

Nothing unusual, novel or interesting for you, gentlemen, occurred in the delivery, which was naturally effected in five hours. The lady became impatient, hence I conducted the case under the administration of chloroform, in its usual mode of application. As my custom is to deliver the placenta immediately after removing the child from the bed, (unless some violent symptom is manifest) I proceeded to this task. Taking hold of the cord with my left hand, I introduced my right index finger to ascertain if the placenta had been expelled from the uterus. It had not; but I found a clot just exuding from the os, which I removed, and from its peculiar feeling, I placed it in my left hand, and proceeded to search for the secundines, and found hour-

glass contraction, revealing to me the fact of adhered placenta, as I do not think this hour-glass contraction ever occurs without this adhesion; at least, not so in my experience of many cases. With more chloroform, I found but little difficulty in overcoming the contraction, and breaking up the adhesion, and rendering the lady comfortable.

All the while I held on to my little supposed clot, with its singular feeling. I took it to the light, and, upon examination, found a well defined fœtus, three and one-fourth inches in length, and from all indications, one of two and one-half months' development. From the pressure of its fully developed companion in the womb, it, having no osseous tissue, was flattened antero posteriorly. Its cuticle was slightly discolored, but there was no further evidence of decay, and it was my firm conviction that it ceased its fœtal existence about a week before, a time corresponding with my former visit. The other child was well developed, healthy and plump, and still living and growing rapidly. The mother made a good recovery, with the exception of a somewhat too free lochial discharge some days after, which was promptly relieved by the removal of a clot.

The point of great interest which I wish to submit is: When did this embryo fœtal production obtain its primeval existence? Was it coequal with that of its well-developed sister, or was it two and a half months anterior to birth? If the first proposition prevails, why did it continue for eight months and not develop in ratio with its fellow? Six inches of umbilical cord was attached to it, and, after diligent search, I could not find its separate placenta. Though, I may have overlooked it, but am sure there was no point of juncture with the other cord or section of it attached to the other placenta.

Although I have heretofore disbelieved in the possibility

of the impregnated womb admitting of a second conception, yet the first proposition seems so absurd and unreasonable to my mind, that I am forced to give the assertion some consideration. I have known—as, very probably, all of you have—some ladies to menstruate regularly during all their periods of gestation, although this lady disclaims having done so. Now, we all know that the females of the brute creation do menstruate without any show, though I have seen a few exceptions. We further know that many thousands of conceptions take place in the human female during the period of lactation when there is no show. Did they not menstruate?

Else, how could the spermatozoa meet with an object for its fructification? Assuming these latter grounds to be true (and facts prohibit their refutation), is it not possible that my patient menstruated during gestation without show? I claim this to be a rational solution of this rare case. Yet I desist from further speculation, hoping, at some unoccupied time of the present session of the Association, the matter may be discussed by abler heads and more experienced minds.

ECLAMPSIA.

I do not report this case from anything new in its treatment or unusual in its nature, but trust that it may be a caution to younger members of the profession against "giving up a case." About the first of last month (March) I was called to a primipara lady whom I had been engaged to attend in her confinement. I had grave apprehensions for her as I had visited her repeatedly in her catamenial periods for several years previous to her marriage, and she had each time a few light convulsions which yielded to treatment very promptly. Her husband living at a little village eight miles away, I went fully equipped to fight my dreaded foe. At

eight o'clock A. M. I reached her, and found her in labor with all the indications and appearances favorable. Everything proceeded favorably until ten and a half o'clock P. M., and as the vertex began to emerge through the vulvæ a convulsion came on, and although it was very hard, she completely rallied by the time I delivered her, which required about twenty minutes. I had, on the appearance of the convulsion, sent for Dr. Thomas D. Walker, who lived near by. When he arrived I was through with the secundines, and as the infant needed some attention from me, I left the bed-side requesting him to observe her very closely, as I was not yet satisfied.

In fifteen minutes, while in cheerful conversation, she was again seized, and we bled her as long as the blood would flow. She did not rally, but soon another attack, and thus on until she had forty-three very hard convulsions. We continued to bleed her as long as we could get blood, immersing the arm in hot water, used chloroform, morphia and atropine, hypodermically, all seemingly to no purpose. Her family had long despaired, and implored us not to punish her further. We persisted however, and the family all left except one lady. My associate and I expressed no possible hope. At seven o'clock A. M., he feeling exhausted, took a walk to refresh himself in the open air. At eight o'clock he returned and asked when she died, not having looked at her. She is not dead but better—has had no paroxysm since you left. Of course he was surprised. She had no more, and gradually regained consciousness and made a good recovery. I cannot pretend to say which, if any, of the remedies relieved her. Though I have confidence in all of them, especially the venesection.

TUBERCULAR MENINGITIS.

BY GEORGE J. GRIMES, M. D., COLUMBUS.

Mr. W., aged forty-eight, merchant and planter, had been in the enjoyment of good health up to three years ago, at which time he contracted a cough, and about which he consulted me a short time thereafter. He had no fever, and an exploration of the chest failed to give any physical signs except a few mucous rales. He was ordered a simple cough mixture, and was seen no more for several months. At the expiration of this time, however, he called again to see me for the same trouble. The examination of the lungs at this time showed a perceptible dullness at the apex of the right lung with bronchophony, tubular respiration, and other signs, denoting solidification. He had occasional fevers in the evening, and a cough, with some expectoration and slight hemorrhages. Quinine, cod-liver oil, and anodynes to allay the cough were prescribed, with directions to lead an out-door life as much as possible. Under this course of treatment he seemed to improve; the febrile movements ceased, the cough and expectoration decreased, and there were several pounds increase in his weight. The dullness on percussion had not increased, and altogether, he was doing very well. So well in fact that he ceased to take his medicine, and to observe the hygienic rules which he had been following for the past few months, and went back to his business.

Four or five months passed when he was attacked with remittent fever, for which he was treated and relieved.

While visiting him for this latter trouble he was again subjected to auscultation and percussion, with a view of noting any change that might have taken place in the lungs since the last examination. The area of dullness was found to be greater, but still confined to the upper lobe of the right lung with diminished respiratory movement in that situation.

After recovery from his malarial difficulty he was again put upon tonic treatment, with the addition of alcoholic stimulants and certain hygienic rules laid down for his guidance. No very perceptible improvement was observed, and he continued to have hectic fever, night sweats, cough and occasional hemorrhages, with nothing to call attention to head symptoms until about the first week in November, 1877. He was not seen by me at that time, but the family have since told me that up to that date his intellect seemed to be unimpaired, and that as a rule he appeared to be in pretty good spirits, which is the rule, generally speaking, in patients suffering with pulmonary tuberculosis.

I have been thus particular in describing the first portion of the history of this case, in order to show the relation it bears to the sequel which is to follow. About the time spoken of above, that is, the first week in November his disposition changed, and from being of a sunny temperament, with good business qualifications and excellent judgment, his mind became cloudy, and he appeared melancholy at times, which would alternate with a flow of spirits almost amounting to hilarity. His memory in business transactions was noticed by his associates in business to be not so good. He continued in this condition until November 29th, when he was compelled to take his bed and send for a physician. When visited he was found much reduced in flesh, and very feeble. His pulse not much accelerated, his breathing about natural, skin dry, some cough and expectoration, with vom-

iting and not much appetite. Bowels constipated. Ordered enema to be given.

Nov. 30.—Still vomiting, no action from the bowels, respiration and pulse about the same, skin dry, complains of pain in the head, abdomen flat, intellect impaired, does not remember well, anorexia. Directed cathartic to be given, and if it did not act in six hours, to be repeated. Mint julep and beef tea to be given as often as every three hours.

Dec. 1.—Pulse 80, respirations normal, nausea not so bad, headache and some restlessness, skin about the same, some cough and expectoration, bowels still constipated, walls of abdomen retracted. Cathartics kept up, and enema directed to be given. Cold applications to head, and sustaining treatment.

Dec. 2.—Bowels acted once, appearance of abdominal walls the same, skin slightly moist, takes his nourishment better, pulse 70, complains of pain in the head still, and is disposed to be restless. Ordered milk punch and such articles of food as he could be induced to eat; anodynes to relieve pain and promote quietness, with cold applications to head and dilute phosphoric acid three times a day.

Dec. 3, 4, 5.—Condition about the same; doesn't like the bed, and when he gets up, walks with difficulty, and has to be assisted. Directed same treatment to be pursued.

Dec. 6.—Great restlessness, headache with knitted brows, skin moist, stomach quiet, abdominal walls retracted, bowels quiet, respirations 22, pulse 60, thermometer shows some fever. Sustaining treatment.

Dec. 7.—Restlessness, puts his hands to his head and complains of severe pain, skin moist, pupil of right eye considerably dilated, pupil of left eye normal size, brain acts slowly, has to be asked a question several times and then answers with difficulty, respirations about the same, pulse between 55 and 60. Same treatment continued.

Dec. 8.—Has to be watched continuously, wants to get out of bed, picking at the bed clothes, some subsultus, pupil of right eye still dilated, left pupil natural, diverging strabismus of right eye, passes his water in bed, pulse 55, coma coming on.

Dec. 9.—Carphologia and subsultus, prominent symptoms in the morning; same condition of pupil and rectus muscle of right eye; respirations difficult and stertorous, which, toward evening, grow worse; pulse in the morning slow, but increasing in frequency as the day advances; passes his water in bed, and has had the first stool since the 2d, which was also passed in bed; has stiffness of the muscles of the neck on the right side; coma increasing; death took place at 4 o'clock in the morning of the 10th. No autopsy.

Remarks.—It is to be regretted that a *post mortem* could not be held in this case to verify the diagnosis. But the family protested, and it was not insisted upon. That it was a clear case of tubercular meningitis, with the *caseous foci* in the lungs, is a conclusion in every way warranted by the clinical history. The fact that he had pulmonary tuberculosis for at least three years is certain, and, at this advanced age of medical science, it is not necessary that an examination should be held after death to determine positively that a patient during life suffered from pulmonary trouble, giving such a true history as the above case did of that affection. The physical signs were unmistakable, and when taken in connection with the other symptoms, such as cough, hemorrhage, hectic flushes, night sweats and impaired nutrition, it is fair to infer that the diagnosis thus far was correct. It is also well recognized by pathological writers of the present day that there must be a cheesy spot in some of the organs of the body before there can be a development of miliary tubercles in the pia-mater; and if such is the fact

there certainly was strong probability that the condition of the patient at the time commencing brain trouble set in, made him eligible for that disease. The psychical disturbances, dilatation of pupil, diverging strabismus, severe pain in the head, knitting the brows, picking at the bedding, with stiffness of the muscles of the neck, marked retraction of the abdominal walls, and stubborn constipation, together with the fact that there was no eruption on the skin, and that the patient did not recover, is sufficient evidence to warrant one in making out a diagnosis of tubercular meningitis, in the absence of any *post-mortem* knowledge to the contrary.

YELLOW FEVER.

ITS HISTORY, CAUSES, NATURE, PATHOLOGY AND TREATMENT; CONSIDERING EXCLUSIVELY THE EPIDEMIC OF 1876 IN SAVANNAH.

BY J. C. LE HARDY, M. D., SAVANNAH.

In fulfillment of a promise made at the last and very pleasant meeting of the Association in Macon, I present for your consideration a sketch of the yellow fever epidemic of 1876 in Savannah.

Not willing to take a lion's share of your time, I have contracted this paper as much as was compatible with clearness; and yet, its proportions have grown to such a bulk, as may tax your patience. I state only well authenticated facts, and draw my conclusions from a comparison of these facts with my own observations.

My offering, I fear, will fall short of your expectations; yet, I hope it may be a help, like the widow's mite, in the great box of medical lore, in removing the existing dread of the disease; in simplifying the treatment; and, perhaps, in saving the lives of some fellow-creatures, in future epidemics.

THE HISTORY OF THE EPIDEMIC.

It is, perhaps, well to state, that the year preceding the epidemic was uncommonly dry: the rainfall being forty-nine inches—much below the usual average.

Most of our swamps became so desiccated that deep crev-

ices could be seen, where the water had formerly been the deepest. As a result of this, malarial fevers were not as numerous as usual, and the general health was much better than common.

The following winter being very mild, vegetation suffered but little from the few days of frosty weather, and it became luxuriant at an early season.

The swamps, ponds, and lowlands surrounding the city were filled with water by the rains which fell in January and February; and, where not in cultivation, the lands remained sobby throughout the following summer of 1876, for want of proper drainage. The ditches and drains made for this purpose having been neglected the preceding dry year, and trampled by cattle, weeds and debris obstructed them everywhere.

In February and March, the stagnant water in the ponds was already covered with a thick coating of algæ, water ferns, and other water-plants belonging to this zone.

In June and July, this coat of green became unusually thick. At this date, in some specimens that I collected, the *Azolla Caroliniana*, with its pendant rootlets, its rough roundish leaves, and spore cups, was most numerous.

Also, at this date, when the weather had become intensely hot, rain-water, standing a single night in the streets, could be seen the next morning, already coated with a green vegetable scum, in which I found specimens of *protococus pluvialis.*

In the months of July, August and September, so impregnated was the atmosphere with germs, that boots and shoes would become covered with mould (*Penicillum Glaucum*) within twenty-four hours, although kept in closets. Guns and swords rusted in their cases, and surgical instruments required constant attention.

In June, the rain fell so heavily (18 inches in 16 days) that the pressure of the accumulated waters in the swamps broke through the dams protecting the low grounds on the western side of the city. The greatest part of this extensive tract of land was thus covered with water, and, for want of sufficient drainage, remained partly so during the prevalence of the epidemic. The exposure of such an area of stagnant water and mire under the rays of the sun produced, not only an immense bed of spore-bearing and other plants, but the heated water, acting on organic substances, both animal and vegetable, evolved noxious and nauseous gases, hydrogen sulphide, ammonia, carbon oxide, phosphoretted hydrogen, etc. On the eastern side of the city, in addition to the extensive area of stagnant water and boggy soil, producing the same results as stated above, the city sewers sent their contents into a wide, open canal, there to be exposed to the rays and heat of the sun, month after month. The stench evolved from this source can hardly be appreciated by any who did not pass within the range of its nauseous emanation.

On the north, or river side, Hutchinson's island, distant some twenty yards from the city front, was in a sad condition, as regards drainage; the greatest part of the island, being accessible to spring tide water, was kept sobby, and, in many of its old fields, the water would stagnate from one spring tide to the next. Fig island, on the east-northeast, was in the same condition.

In the city proper, there were three thousand three hundred and sixty-six privy vaults, built of porous brick, without cement, allowing all soluble materials to percolate through the sandy soil into the drinking water bed, and nauseous gases to escape into the yards, streets and buildings. There were over twelve hundred cess-pools, made also of brick,

without mortar, and receiving waste water, and the contents of water-closets, polluting not only the drinking water, but admitting mephitic gas into the interior of houses, through the connecting pipes. The sewers, not cemented in the lower segment, allowed the percolation of a part of the insufficient supply of water; so that fecal matter, and other debris collecting there, would create fetid gasses, which gasses escaped into the streets, through the traps, and into the houses, through the connecting pipes.

The sections of the city principally inhabited by the working classes, (white and black) and extending on the eastern and western slopes of our bluff, were in their usual wretched sanitary condition. The streets narrow, running east and west; the houses wooden, small, decaying, built in tenements, with miserable ventilation; the yards small, with high plank fences, and filled up with offal of all sorts; their privy vaults badly closed; stables, pigeon and poultry houses, etc., all huddled together. Here was the picture meeting the eye on every side! Such a combination was quite sufficient to produce filth-diseases; but it had existed for years, and although it was not, in my judgment, an efficient cause for yellow fever, yet during an epidemic it could aggravate its ravages.

The months of June, July and August were remarkable for the intense heat of the sun's rays, (maximum in the shade 99°, 100°, 97°; mean 80°, 84°, 82°,) and especially for a peculiar stagnation of the atmosphere which made it feel extremely oppressive to move about, or breathe (average velocity of wind for twenty-four hours, twenty-four miles in June, thirty-four in July).

The nights, which are generally pleasant and refreshing, were then so hot and stifling as to keep the body in a pro-

fuse perspiration, scarcely allowing sleep, and depressing the nervous system. This state of the atmosphere placed our population in a very favorable condition to be affected by malarial or other poisons.

In June and July, the number of fever cases increased, and the type of fever became more congestive in its form. Early in June Dr. J. B. Read treated a case of sporadic yellow fever in Lover's lane. On the 5th of the same month another case (Dresser's child) occurred in his practice, in the central part of the city (Jones street). The fever was attended with black vomit and great depression. On the 14th Edward McGloin, in Liberty street, was taken with the same fever, and died on the 22d. In July a priest was treated by him for a fever of the same nature. On the 4th of August I attended a case of intermittent fever, terminating fatally during the third paroxysm, the temperature reaching 107½°.

On the 6th of August, Thos. Cleary was taken sick with a fever, believed to be yellow fever, in the eastern part of the town. On the 11th a case occurred in the N. W. of the city in Joachim street, (Woodhull). On the 15th, Dr. W. M. Charters attended a case of fever in Yamacraw, which terminated fatally with black vomit, and is considered by him a genuine case of yellow fever. During the month of August, a number of cases of congestive, and other malignant fevers, occurred, both on the eastern and western slopes.

On the 21st day of the same month, Dr. Geo. H. Stone brought, for the first time, the attention of the health officer to a case terminating fatally with black vomit, and pronounced by him yellow fever.

A considerable number of cases, of the same type, followed this in succession, on the eastern slope extending to the Atlantic and Gulf Railroad grounds. From the 22d it was recognized on the western slope, and in a few days it

extended the whole length of the city on that side. Up to the first days of September, but a few cases of the disease had occurred in the central part of the town. From that time, the disease gradually invaded every street, and by the 20th, it had spread over the whole city. From September 6th to October 6th, the epidemic raged with terrific violence.

At this latter date, the temperature lowered (mean 61°), a change occurred in the direction of the wind (N. E.), and new cases gradually decreased in number, but the epidemic did not entirely disappear until the occurrence of a light frost on the 14th of November.

THE CAUSES OF THE EPIDEMIC.

In seeking the causes which led to the epidemic under consideration, I have endeavored to be guided entirely by the light of facts, unbiased by the opinions expressed by writers on the subject, whether at home or abroad. I have been unable to avoid dwelling at some length on this, the most important part of my essay, and I ask for it your patient attention.

In order to afford a clear understanding of the causes, it will be necessary to give a topographical view of our city and its immediate surroundings.

Savannah stands on a plain or bluff on the south side of of the river bearing the same name, some twelve miles in a direct line from the ocean. This plain, elevated about forty feet above low-water mark, is composed of a fine, yellowish sand, intersected by beds of clay and ferruginous sandstone of new formation; the water bed being from twenty to twenty-five feet below the surface. The bluff extends along the river, from east to west, for the distance of more than a mile, terminating somewhat abruptly. Toward the south, it extends for several miles, with a very gentle de-

clivity. Some two hundred yards from, and opposite the city, on the north, lies "Hutchinson's Island," formerly a cypress swamp, and made entirely of alluvial soil and vegetable debris, subject to overflows at every spring-tide. On the east and west, the bluff slopes gradually into low lands (formerly swamps). These are protected by dams, which are necessary to prevent their overflow by the tides, which rise about eight feet at this point. On the west, a canal extends along part of the slope, whose waters are covered with vegetation during the summer months, and which form a receptacle for dead animals and garbage. On the eastern side, an open canal of considerable width drains off the sewage water from the city into the river. On the southwest, and partly in the city limits, lies the cemetery, and beyond this are extensive swamps.

The city proper is open and spacious, divided by numerous wide streets and lanes, intersecting each other at right angles, with large open squares at regular intervals. It is well adapted to a warm climate, being protected from the direct rays of the sun by a double row of trees in each street; and its elevation above the surrounding country gives it the advantage of a pretty regular sea-breeze in summer.

On the eastern and western slopes, however, the streets are narrow, the houses and yards small, badly ventilated, and much crowded together.

Selected by Oglethorpe on account of its elevation, the site of Savannah was originally a pine forrest, surrounded east and west by a very thick and luxuriant swamp-growth of trees and vines. A small portion of this high bluff was cleared, streets and squares were laid out, and houses were built by the colonists. A map made in 1734 indicates that the clearing was only sufficient to allow the building of a front of four blocks. The clearing was gradually extended

to the slopes on the east and west of the bluff, but it was not until about 1758 that mention is made of the growth of rice in the swamp lands on the eastern side of the city.

Gov. Wright, in his message, states that the exportation of rice from the colony amounted to 3,400 pounds in 1760, and to 10,235 pounds in 1765 (Stevens' History of Georgia). In the examination of the records of Savannah, I have not been able to find a single fact demonstrating the existence of yellow fever in its limits during the last century; and in this connection, I will quote from a letter of Col. C. C. Jones, so well known as a critical historian of his native State. He writes: "Upon reference to the earliest printed accounts of the colony of Georgia, I find that while allusions are not infrequent to the presence of *inflammatory fevers of various kinds, both continued and intermittent, to wasting and tormenting fluxes, to excruciating cholics and dry-belly-aches, to tremors, vertigoes, palsies, and a long train of painful and lingering nervous distempers*, no mention, so far as I can now ascertain, is made of the introduction of yellow fever." In the observations on autumnal fevers in Savannah, published in 1825 by Dr. W. C. Daniell, he relates that "it was known that whilst these (swamps) lands remained in a state of nature, they were unproductive of disease, and that some twenty-five years ago, I have been informed by Dr. Jones, Savannah was resorted to, in summer, by inhabitants of Charleston on account of its salubrity."

Whilst in "A true and historical narrative of the colony of Georgia, written in 1741 by James Habersham," he says: "That the clearing and cultivation of new lands originated fevers and diseases of various kinds, which brought on, to many, cessation, both from work and life."

Toward the beginning of this century, however, when the

low-lands east, and a portion of the swamps northwest, had been brought into cultivation, and rice was planted to the very foot of the bluff, fevers became much more prevalent in the town; the mortality increased fearfully, and the type of the fevers reached its highest grade. Black vomit was now spoken of for the first time. In Dr. Wm. Waring's pamphlet, written in 1821, on the epidemic of 1820, he mentions "that cases of this 'continued fever' had occurred to a greater or less extent every year for the last thirteen years, and that, at the hospital, there were cases terminating in black vomit every season."

From 1804, the medical profession urged on the city authorities the necessity of drainage. Dr. R. D. Arnold, in an address before the Georgia Medical Society, says: "At that time rice was cultivated on the low grounds, adjacent to the city, up to the very door-sills of our houses. On December 12, 1804, the members of our Society took the decided stand: "That with a semi-tropical climate, such as ours, there could be no worse or more malignant incidental cause of disease than the stagnant water, which remains on a rice field, exposed to an ardent summer's sun, and the saturated soil, which is next exposed, when the water is drained off."

"The first efforts of the Society were directed toward the abatement of this evil. A plan of dry culture was proposed." It was not, however, until the fall of 1817, when an epidemic of yellow fever had caused a great increase in the mortality, that the city enforced the dry culture system, and it was in operation in the spring of 1818.

Mr. Archibald Smith, formerly a rice planter in Savannah, writes, in answer to inquiries: "The first epidemic I remember occurred in 1817, at which time the city and its surroundings were in a fearfully filthy condition. The rains had been very heavy and the heat excessive, as might be as-

certained from Dr. Oemler, who kept a meteorological journal at the time."

In a report made by the dry culture committee, to the city council in 1824, the mortality, as compared with the population, was reported as follows:

1815	1816	1817	1818	1819	1820	1821	1822	1823
1 in 15	1 in 18	1 in 9⅝	1 in 62¾	1 in 18	1 in 5 1-10	1 in 37	1 in 33 4-5	1 in 52 1-6

"For the last two seasons, those of 1824–25, there has been a further improvement in the health of Savannah. The latter year may be considered fully as healthy as that of 1818. (W. C. Daniell.)

"The success of the dry culture system, in 1818, surpassed the expectation of its warmest friends." But dry culture *did not pay;* hence, the drainage of these lands was neglected; and this, together with "the introduction of a great number of white laborers, unaccustomed to the climate," (W. C. Daniell) increased the mortality, by fevers, to nearly its former rate—"although in 1819 but few of the old inhabitants suffered from it." (W. C. D.)

Of the epidemic of 1820, Dr. Wm. Waring says: "The winter of 1819–20 was remarkably mild. There were considerable falls of rain in the spring. In March, April and May, the monthly fall of rain was nine inches. In June and July the fall of rain increased. In August, there were twelve days of incessant rain, amounting to thirteen inches." He includes the following table, showing the result of thermometrical examinations in the shade:

1820.	Feb.	Mar.	Apr.	May	June	July.	Aug.	Sept.	Oct	Nov.
Med.	75	68	77	75	81	85	82	75	67	65
Com.	85	80	92	90	92	96	90	85	85	75

This table shows a very early summer heat.

"During this time (the beginning of the epidemic), the atmosphere was loaded with vapor, and very oppressive. A

constant sense of great oppression was produced by the heaviness and want of elasticity in the air. In regard to the city, however, there are many peculiar circumstances, not only because of its internal condition, but of its remarkable elevation and exposure to the most concentrated operation of these general causes. Standing on a lofty bluff, and being entirely defenseless against the influences of extensive marshes, on every side, except a point to the South, it affords an intercepting barrier and lodgment for the abundant fogs which are constantly raised from them."

"The houses became damp, and articles, which were even locked in drawers or trunks, grew mouldy and rotted. With respect to the dry culture, it is to be observed that this system has been only partially carried into operation, and at best, comprehends but a small portion of the swamp lands, which more or less extend their influence to the city."

"The dry culture system is the only great radical mode which can be adopted with any prospect of rendering this city a tolerable residence during the summer and autumn."

Again, he states: "I have inquired particularly into the subject of importation, and there does not appear to be any better reason for ascribing the disease to this source than to the dry culture system." (Here he states his investigations on this point.)

Daniell says: "It has appeared to me far more reasonable to suppose that autumnal fevers (comprising yellow fever) are produced by qualities imparted by marsh miasma to the atmosphere."

Dr. Lemuel Kollock, writing to Dr. Wm. Waring in 1821, says: "Your views on the subject of our fevers, in point of *character and origin*, correspond with the observations I have made in thirty years' practice in this climate; and the last year presented to us the fever of warm climates, in its

various grades, from the intermittent to the continued form, and fully confirmed the opinion I have long indulged in, of their identity of character."

"In 1821, the proprietors of the dry culture lands were induced to pay more regard to their contracts, and their lands were thus placed in a good condition; the result was, a marked decline in the mortality." (Daniell.)

In 1824, the Sanitary Committee says, in its report:

"Previous to the introduction of the dry culture system, the bay was as notoriously the most unhealthy part of the city, as the portion south of South Broad street was then the most healthy. The reverse now obtains. The bay, from its proximity to the lands subjected to the dry culture system, is most immediately under the influence of that system, and its improved salubrity is one among the many unequivocal evidences of the agency of the latter upon the health of Savannah; whereas, that portion of the city south of South Broad street, formerly furthest removed from the cultivation of rice, has, within the last three years, been thrown more immediately under the influence of wet culture, by the opening of an extensive rice field immediately to the southwest."

Dr. R. D. Arnold, speaking of the yellow fever epidemic of 1854, in his Essay on the Relation of Bilious and Yellow Fevers, writes:

"The summer had been the very hottest I had ever experienced." "The difference of mean temperature does not give any correct idea of the relative heat of two summers. According to the registry published in our newspapers in 1855, the mean temperature of July, 1854, was but one degree above that of 1855. Now, the contrast, as to *feeling*, was immense. July, 1855, was a remarkably pleasant month; July, 1854, will live in the memories of those who sweltered

under it, in this city, as by far the hottest and most oppressive month ever experienced by the oldest inhabitant." "In 1854, it was my lot again, as in 1852, to have the first yellow fever patient."

On the question of the origin and propagation of yellow fever, he says: "I can bear my decided testimony, that in no instance has there ever been the shadow of the shade of proof that it ever was imported into Savannah from abroad. On the contrary, the proof is positive that its first victims had had no communication, direct or indirect, with any source of infection. Moreover, when the British steamer *Conway*, which ran to the West Indies, touched at this port, I attended two cases of yellow fever from her, both of which died in the city, and yet no disease was propagated from them."

I have thought it necessary to make these numerous quotations from the very birth of Savannah, and from the most reliable records I could reach, in order to show you that although there existed free communication between this city and Charleston, where yellow fever frequently occurred as an epidemic, and the West Indies. where the same disease was endemic; yet, for at least seventy-five years, no yellow fever occurred here; but on the contrary, that the health of Savannah remained good so long as the natural growth of the swamps was left undisturbed; whereas, when these lands were cleared, fevers increased, and their type became more virulent, finally reaching the continued form, terminating in black vomit in 1807. That from 1807 until 1820, cases, terminating in black vomit, occurred every year in the hospital. That in 1817 and 1819 yellow fever occurred as a partial epidemic, affecting principally the unacclimated population among the laboring classes. That in 1818, in which year the rice lands were cultivated, under a dry culture system, the

health of the city was not only greatly improved (the mortality falling from 1 in 9⅜ to 1 in 62¾), but the fevers returned to a milder type.

Then again, that in 1820, 1854, and I add 1876, when yellow fever raged here as a general epidemic, a *very peculiar and almost identical condition of the atmosphere, and other telluric influences existed*; that is, each of these epidemics was preceded by a mild winter, an early spring, with a rainfall sufficient to fill the ponds, swamps and low-grounds surrounding the city, with stagnant water, and finally, with the intensely hot and oppressive month of July. That all grades of malarial fevers occurred during these years, of which the type eventually assumed the characteristic of the prevailing epidemic; and that, during these epidemics, the negroes seemed to be exempt from the influence of the poison, except in 1876; and in that year the white and colored races contracted the fever with equal susceptibility, but the difference in their mortality was very marked. In none of the records that I have had access to, made in Savannah *by persons living there at the time of these epidemics*, nor in the writings of Drs. Waring, Daniell and Arnold, have I been able to find a well authenticated proof that any of the epidemics of yellow fever that have occurred here owed their origin to importation, either through the agency of vessels from foreign ports or through infected persons. On the contrary, numerous instances have been noted where cases of genuine yellow fever have been brought from the West Indies, or other ports, in ships, and have died in hospital here, where persons contracting the disease in Augusta and Charleston have sickened here, and died of it, without occasioning, in either case, a spread of the disease. Where sporadic cases have originated here, they have been traced to a local cause.

Moreover, the theory of importation seems difficult to sustain, if we take into consideration the facts that since the drainage of the low-lands surrounding the city we have had only three epidemics, namely, those of 1854, 1858 and 1876; and that while a constantly increasing commercial intercourse has been carried on between this port and the West Indies where yellow fever prevails every year as early as March, April and May, it never appeared here before the end of July, and sometimes not until October. Yet, I am convinced from the testimony of writers and by my own experience, that "*contagium vivum*," producing yellow fever, *when left undisturbed*, can be carried in ships or any other closed vessels to any distance over land or water. That persons entering such closed vessels, and inhaling the poisoned atmosphere, may develop the disease; or that this poisoned air being liberated by ventilation, will spread and reproduce the yellow fever germ, *provided it finds the atmospheric and cosmic conditions necessary to its growth.*

It is also my conviction that so far as Savannah is concerned, the yellow fever germ can originate without importation.

Let us now consider whether, as it has been advanced, the filth of the city, the gases emanating from sewers, cess-pools, privy-vaults, water-closets, etc., or the contamination of the drinking water, are sufficient causes of yellow fever.

In 1817 and 1820 there were evidently privy-vaults; but there were no cess-pools, water-closets, or sewers; yet, in 1820 especially, the epidemic was fearful, the death rate being 1 in 5 1-10 of the population.

In 1854, when a yellow fever epidemic again ravaged the city, cess-pools had just been introduced, and two short lines of sewers had been built, to carry off the rain

water; but these additional causes seem too limited to have affected the health of the city at that time.

It is also observable, that, at the next recurrence of a yellow fever epidemic, in 1858, *these causes were in operation to a greater degree*, on account of the increase of population, etc.; yet, the type of the disease was milder, and although spread over the whole city, cases were, comparatively, few in number. In 1864 and 1872, when the causes had been greatly augmented, the disease appeared amongst us, but was too limited to be considered epidemic.

The present system of sewers was completed in 1872–73, and fecal matter carried to the river through Bilbo's canal; yet, with this additional focus, no yellow fever occurred until 1876. Had filth, and its resulting gases, and pollution, been capable of producing yellow fever once—its presence being ever-acting and increasing, its effects should be constant, and we would have yellow fever recurring here every summer, under the influence of our solar heat, which varies very little from year to year. But this is not the case; year after year passes, without a single case of this fever in our midst.

If we fail to find in importation and in city filth a sufficient cause for the origin of yellow fever epidemics in this place, we must needs look for another, and that of such a nature as can be called into activity under certain peculiar conditions.

Such cause, so far as may be gathered from the history of Savannah, can be traced to the condition of the low-lands surrounding the city; for we have seen, that so long as the swamps, east and west, remained undisturbed and covered with their natural growth, the health, within the town limits, remained good; and, for seventy-five years, the nature of the fevers was the same as that existing in the surrounding

country. But, when these lands were cleared, "fevers and diseases of various kinds originated," and at the beginning of this century, "when rice was cultivated to our very door-sills," the type of fever changed during the summer months, passing from the intermittent and remittent of former years to the "continued", until it finally reached, in 1807, its most fatal form, terminating in black vomit, and that from 1807 until 1817 "cases terminating in black vomit occurred every year."

In 1817, we hear, for the first time, of an epidemic of yellow fever; whilst in 1818, under the enforcement of the dry culture system, the mortality, greatly decreased. In 1819, the cultivation of lands under the dry culture system being neglected, an epidemic again broke out among the foreign population. In 1820, the low-lands were in a very neglected condition; rains were abundant; the heat of long continuation, becoming very oppressive in July and August; and a general epidemic occurred, producing a fearful havoc among all classes of the inhabitants. In 1821, the dry culture system was again enforced, and the lands kept in "a fine order," and from this date until 1827 there are no records of the recurrence of yellow fever. "During the fall of this year," says Arnold, "yellow fever broke out in the city; but occurring late in the season, it did not prevail very extensively." "From this year up to 1839, I never saw a case of yellow fever in the city." "In the last of August, 1839, a patient, fresh from Augusta, entered the city hospital and died in a couple of days. A short time afterwards, a patient from Charleston entered and died." "I still look upon this year as the sickliest I ever experienced in Savannah, with the exception of 1854. Old inhabitants recollect it as the dryest summer on record. It was also a hot summer. Bilious fevers prevailed here, and over the whole country, in a

malignant form. It is worthy of recollection, that although these two cases (of yellow fever) were placed in the wards of a hospital filled with bilious fever patients, there was no propagation of the disease." "Later in the season, I did meet with several cases of yellow fever, but they were so few in number that I considered them sporadic, and they most undoubtedly originated on the spot." "In 1840, I met with one solitary case of yellow fever. In March, 1841, one case was brought to the hospital from Demerara, and in October of the same year a case occurred in my private practice. A few cases occurred at the hospital late in the fall of that year. From this date until 1852, with the exception of a sporadic case in June, I met with no yellow fever until the fall of 1852. In September, a painter, who had no connection with Charleston or Havana, was attacked in the northeastern portion of the city. The fever began to show itself in several places about the middle of October, but a frost early in November cut it short." (Arnold.)

From 1821 the dry culture system was kept up and extended east and west of the city, and although it never was perfected so as to keep the low-lands dry, in ordinary years when the rainfall was not unusually great, the higher parts were either cultivated or dry; and the health of the city improved materially; so much so that there was no return of an epidemic until the year 1854. This year heavy rains fell after a mild winter and early spring, followed by a hot summer and a July "by far the hotest and most oppressive ever experienced by the oldest inhabitants." In 1858, as early as May and June, violent remittent fevers appeared, taking a congestive form, attended with paralysis, in July and August, and in September, culminating in the "continued" or yellow fever form, with black vomit. During this year also, the low-lands were wet and sobby, and the heat, al-

though very intense at times, was intermittent. That peculiar and lasting oppressiveness, which was so graphically described by Arnold in 1854, and so remarkable in 1876, was wanting in 1858. As a result the epidemic which extended over the whole city, was of a mild type, and its victims comparatively few. In 1864 the whole of the western low-lands were covered with stagnant water, for the purposes of war. The summer being pleasant, although malarial fever prevailed extensively on the western slope of the city, only a few cases of yellow fever (six that I could trace) presented themselves. In 1872, after a rainy and very hot spell of weather, some thirteen cases broke out in a part of Yamacraw, where stagnant water had been allowed to remain in the street and under houses. On the removal of this local cause the disease was checked in its progress. Again the winter of 1876 was very mild. The spring and summer set in early, with a high temperature; the months of June, July and August were remarkably oppressive, on account of the stagnant atmosphere. The rainfall was sufficient to fill the swamps and ponds, and to keep the badly drained low-lands wet and sobby.

To recapitulate: We find that when our city was visited by destructive epidemics, in 1817, '20, '54, and '76, the same conditions of earth and air existed to a very striking degree, and were *particularly noted by those immediately under their influence.*

Hence the inference, that for the production of a yellow fever epidemic in Savannah, the following atmospheric and telluric conditions are necessary, to wit: A mild winter, succeeded by a long coutinued oppressive heat, and stagnant atmosphere; with a large area of stagnant water, and wet soil. But such a combination, cannot *per se* create an infectious disease of the nature of yellow fever. It may

generate chemical action. The chemical action of heat on water containing organic matter, will produce gases or "dead miasms."

In relation to this point Tyndall says:

"The mode by which the various *infections* extend, fully supports the doctrine that they depend upon a living principle, not a dead miasm, or a peculiar atmospheric condition.

"Another evidence that the various *contagia* possess life, consists in the fact that they always reproduce and multiply strictly after their kind." And again, "the morbid phenomena produced by the action of a *contagium vivum* is self limited."

Convinced by my own experience and study, that yellow fever is a disease reproduced invariably after its own kind, and must depend on a *contagium* which is self-limited in its existence, and will reproduce under the same atmospheric and telluric conditions, its own species, I extended my investigations in this direction; and it is to the vegetable origin of yellow fever that I now wish to call your attention.

"Whenever," says Hirsch, "the temperature of summer rises to 59° or 59° 8′, if the materials necessary to its production are present, intermittent fever may occur." But it will occur more frequently and with greater severity, in proportion to the extent of marshes and of its approximation to the higher thermal lines.

In high latitudes, where the maximum temperature does not exceed 60° to 63°, "malarial fevers" will only be produced during the summer, and in the intermittent form. In warmer climates the intermittent fevers are more frequent during the winter and spring months, and as the heat of the sun increases, the remittent forms of fever

prevail. The area, of the remittent fever region, is, therefore, contracted, lying in the marshy or "malarial" sections of the warm, temperate and tropical zones.

Malarial hæmaturia, dengue or broken bone, and the continued fevers of paludal origin are more contracted still, and belong exclusively to the tropical and semi-tropical climates.

It is pretty generally admitted, by medical scientists, both in America and Europe, that malarial or paludal fevers are produced by plants, or spores of plants, growing in marshes, stagnant water, or elsewhere, whether at the level of the sea, or ten thousand feet above it, in high, or in low latitudes. With my present imperfect knowledge of the various plants producing febrile diseases, it would be impossible to say, whether those producing malarial fevers belong invariably to the fungi order.

Lebert says: "It is true, that in diptheritis, vaccinia, small-pox, septicæmia, pyæmia, mycosis intestinalis and in lymph thrombi of puerperal diseases, the globular form of protomycetes prevails. The fact, that Davaine has already demonstrated, the constant presence of rod bacteria in malignant pustule; and that the spiral-like filaments of Obermeyer are found in relapsing fever, prove that the spiral protomycetes may exist in infection, as well as the globe, rod-like, or ovoid, or as the panhistophiton of the silk worm, discovered by me."

But the "protomycetes" of Lebert propagate by "germination," and not by fructification. The result of this is, that the diseases produced by them require either contact, as in vaccinia, pustule syphilis, or absorption into the system by the stomach, through infected water, food, etc., as in typhoid fever, or to change their form when leaving the body in the ejecta, therein completing their

growth, and producing new germs or plants, which being disseminated through the surrounding air, enter the body. This is believed by many, to be the mode of propagation in cholera. At any rate, Kock has demonstrated that such changes take place in the bacillius anthracis of splenic fever.

The history of yellow fever, as well as of malarial fevers, points to a different mode of origin and propagation. They are peculiar to certain localities; have a well defined duration; they always recur under the same conditions, and always disappear under the influence of frost.

The whole atmosphere must contain the germs of these fevers, in order to account for the almost simultaneous appearance of yellow fever, in widely separated portions of a city, and of malarial fevers, over a large expanse of country. Spores of fungi, floating in the air, have frequently been collected, and made to produce the plants of their kind. I have often, after collecting the spores of the mould plant, so common in this locality in summer, watched its growth under the microscope.

These spores are exceedingly light, and are carried up from the earth by the effects of solar heat, when they are wafted about by the winds.

In the same manner, the spores producing yellow fever, rise from the surface of stagnant water or wet soil, and are carried along by the winds until they find a lodgment, in a city, a house, a ship, or other place. Here, by constant additions from the same source, they may concentrate sufficiently to produce effects, more or less poisonous, in proportion to the quantity absorbed.

It is a well known fact, that malarial fevers have been contracted by persons passing through marshes, or sleeping in the neighborhood of these, or other malarial spots. It has also been generally observed that men, who are more ex-

posed to the poisoned air of a city, are much more frequently stricken, during an epidemic of yellow fever, than women, who usually remain at home.

The question next arises, whether the different forms of malarial fevers are produced by spore plants of the same, or of different species. This I deem unnecessary to discuss now; but it may be well to remark that intermittent fevers exist in the localities where remittent fevers prevail, and that both of these are particularly rife in sections visited by continued fevers and yellow fever; also, that the variations which take place in the nature of these fevers, occur *pari passu*, with the increase of temperature.

It is a fact beyond dispute, that where the air of houses, ships, etc., has been allowed to remain undisturbed by disinfection, or by frost, sporadic cases of yellow fever have originated therein; and although intermittent, or remittent fevers were prevailing in the surrounding localities, the yellow fever did not spread beyond the source of infection. This inclines me to the opinion that the disease under consideration is the product of a plant, which can fructify only at a temperature of about 80°, and I think I am sustained in this view of the subject, by the following experiments made during the months of February and March, of this year (1878).

Having collected with great care, during our epidemic, three specimens of black vomit, one of urine, one of blood, one of liver, and two of the dust floating in infected houses, and having kept them sealed, I instituted experiments. These I made under glass bells that had been subjected to a heat of over 250°, to which heat the stand and jar underneath had also been subjected. The water used was first distilled, then boiled; and in order to prevent the access of surrounding air, or contamination from foreign germs, was introduced into the jars, through a previously heated and purified sy-

phon, by which means the specimens were passed into the jars twenty-four hours afterwards.

The results obtained so far are of such a nature as to make me hopeful of bringing to light, at some future day, the *punctum desideratum* in the history of yellow fever.

In two specimens of black vomit, and in one derived from infected dust, I have obtained several plants of a fungus which I believe is peculiar to yellow fever, and which has not, so far as the light of my researches enables me to judge, been described before. The other specimens gave negative results. On the fluid containing the three specimens just mentioned, dark specks appeared on the fourth day. From these specks filaments shot out, and spread rapidly on the surface, and in two days the plant had attained its full growth, extending in a circular form, some fourteen lines in diameter. To the naked eye they appeared like very finely woven spider webs. On the third day, extremely fine projections or stems of about a line in height, could be perceived with a lens. On the next day rounded swellings (sporangia?) were discernable at the extremity of most of the stems. Here, however, the progress of growth ceased, and during the fifth day the spore bearing stems drooped down, and on the sixth day, the plant sank underneath the surface of the water without having matured spores.

Under a 1-5 objective, the mycelium was seen to be composed of innumerable filaments, growing primarily from a common centre, branching off at intervals, and interlacing with each other.

They were formed of elongated cells, destitute of chlorophyll. The stems also were composed of tapering cells. The spore cases were of an oval form, pointed at the upper extremity, and apparently consisting of several layers of

cells, in which was contained a transparent fluid. In no instance did I discover *one*, containing granules or spores.

The mean temperature of my office during the time at which these experiments were made, was 69° in the shade, and I am led to believe from these incomplete experiments, that the yellow fever fungus cannot complete its growth and fructify at a temperature much less than 80° F.

NATURE.

I subjoin for your inspection, a clinical table, which shows, as naught but figures can, the variation of the pulse and temperature-relapses, and the influence of quinine treatment; all of which sustain me in classifying yellow fever as a malarial disease.

For this, my reasons are as follows:

I. Because, it belongs exclusively to malarial countries.

II. Because, I believe its cause to be spores of fungi floating in the air.

III. Because, in violent cases terminating in black vomit, there are instances of indubitable remission or intermission in the fever, and in lighter cases these symptoms are frequent.

IV. Because, in my treatment of the negro population ninety per centum presented the remittent or sometimes the intermittent form.

V. Because, relapses occur as in all malarial fevers.

VI. Because, in the majority of cases, the fever is controllable by the use of sulphate of quinine.

, M.D., DURING TE

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PATHOLOGY.

In a malignant and fatal case of yellow fever, the symptom most striking to the eye, is the abnormal condition of the skin and conjunctivæ; the deep red or purplish hue of the former, caused by the *turgid capillaries, where the circulation is almost arrested* and the same condition, still better defined, in the eyes, where *ecchymosed spots* are so often found amongst the overdistended vessels of the conjuntival membrane.

When feeling the patient's skin, the peculiarly burning heat (*calor mordax*) imparted to the hand, is next forcibly brought to your notice. The thermometer reveals the fact that the heat of the blood has reached 106° to 107°, whilst the pulse, which seldom rises above 100 to the minute, is neither strong nor bounding, but rather depressed.

The question arises, what can produce such a marked change in the temperature of the blood at this early stage of the disease? Do spores enter the circulation, or do they produce their poisonous effects through the membranes of the lung cells? I am unable to say, for several microscopical examinations, made with a $\frac{1}{8}$ objective, on blood drawn during the first hours of the fever, have failed to reveal any abnormal appearance in the cells or surrounding fluid, neither did they discover spores, "protomycetes," or anything else that could account for this extraordinary phenomenon.

But that a chemical change, of a very serious nature, has already taken place in the blood, is made very evident, by the temperature and the appearance of the patient; and my view of the disease is, *that all of its subsequent symptoms are dependent on, and arise from, this chemical change or poisoning of the blood.*

Suppose the case of a strong, hearty man, taken suddenly

ill, a short time before observation, and that the temperature of his blood should have risen seven or eight degrees above its normal state! Will not such increase of temperature, however produced, cause a change in the nutritive functions of the blood? and will not this change alter the functions of the brain and its dependent nerves? Will it not account for the supra-orbital pains, and those in the back and limbs; for the restlessness, the rapid breathing, the stasis in the capillary circulation, which are found to exist at this period?

When the fever has lasted from twenty-four to forty-eight hours, the blood exhibits, under the microscope, material changes in its constitution, especially in the cohesion and color of its cells; and other symptoms occur, demonstrating that the great sympathetic nervous system is now involved. Nutrition ceases completely, and the secretions may fail altogether; and this is generally the case with the liver, and frequently so with the kidneys. Excretion and disorganization begin. Vomiting occurs; a green and yellow fluid follows the ejection of food, if any was contained in the stomach. This is succeeded by a clear but intensely acid fluid mixed with mucus, in which are found floating, small particles of mucous membrane, sometimes rolls of the same, and specks of red blood; shortly afterwards the red blood changes in color, and brown flakes appear, (sometimes these flakes appear first,) they soon increase in quantity, and becoming black, constitute the characteristic "black vomit."

Under the microscope black vomit is found to contain: Blood corpuscles of varied and unnatural shapes, dark in color; epithelial cells, fat cells, fibrous tissue, broken capillaries, pieces of mucous membrane, and various other substances, among which have recurred in several specimens small pieces of a very minute vegetable growth, divided lengthways into cells, also extremely fine semi-transparent

particles of a spherical shape, floating separately, or gathered around the blood cells and epithelium. These were neither sarcina-ventriculi, nor bacteria.

As soon as the liver ceases to perform its functions, as a result, the skin and conjunctivæ become of a yellow color. The bowels may discharge red blood or black blood, but frequently remain inert. The kidneys may continue to discharge a small quantity of heavily loaded urine containing albumen, and sometimes blood; or their secretions are entirely suppressed, in which case death may occur in convulsions from uræmic poisoning.

The cause of death may also be exhaustion, from loss of blood through the stomach and bowels; but "It is by no means always possible to explain the cause of death of the victims of yellow fever," says Louis.

That "the existing pathological lesions cannot always account for the cause of death" in this disease, is the testimony of almost every writer on yellow fever.

Hence arises the eager search for a primary cause, by which its too frequently fatal results can reasonably be accounted for. To my mind, we need to seek no further than the evidence that such changes occur in the blood, as may render this fluid totally incompetent to sustain life.

PATHOLOGICAL ANATOMY.

"*The brain* and its membranes, and also the spinal cord, as a rule, show no special alterations; at the utmost they are found hyperæmic." (Haenish.)

"*The heart* often pale yellow, and brownish yellow, as if undergoing fatty degeneration." (Joseph Jones.)

"*The liver*: Size generally natural, firmness somewhat increased, color generally changed to different shades of yellow; its circulation often diminished, or its blood vessels turgid with dark blood; its appearance reminds us

at first of the fatty degeneration of the liver." (Louis.) "Fat globules are found in the hepatic cells."

The stomach, which from the nature of the symptoms, should exhibit the greatest alterations, presents generally, with its adjacent parts, the œsophagus and small intestines, a considerable congestion of its mucous membrane; the veins are highly injected and turgid, and contain a black blood, which may at times be seen oozing into the cavity of the organ. Ulcerations are seldom seen, hemorrhagic erosions are frequent.

The kidneys are sometimes found in a natural state, but generally the cortical substance is congested. Partial fatty degeneration is at times present.

In a case of complete suppression I have found the kidney almost anæmic, however, ecchymoses have been seen by investigators in the pelvis of the kidney, as well as in the bladder.

The spleen is seldom found enlarged, it is darker, softer, or more friable than natural.

The blood, before or immediately after death occurs, is very dark, and almost uncoagulable, leaving on linen a deep yellow stain surrounding a black center. Under the miscroscope the "red corpuscles" are found to have become dark, stellated, shrunken and separated. In fact the evidences of disorganization in the blood are greater than I have ever seen in any other disease; and putrefaction of the body begins so early that it is sometimes unmistakable even before life ceases.

In the generality of severe cases terminating in recovery, the congestion of the capillaries of the skin, is the same, as in the more malignant cases, but to a less marked degree; the heat is pungent, rising from 102½° to 106°; the pulse

ranging from 116 to 132, is tense and full; the pains in the head, and back, are sharp, sometimes more acutely felt.

The sympathetic system becomes involved at the same time, but not to the same extent; vomiting occurs on the second or third day, and may continue until "black vomit" is thrown up in considerable quantity, but this soon subsides, and the functions of the stomach are gradually restored. The urine, generally diminished in quantity, is sometimes dark and thick, often containing albumen, and may even cease to be secreted by the kidneys for a few hours; but here also the *vis vitæ* brings them back to their natural functions. In the examination of the blood of these patients, before, during, or after the occurrence of black vomit, the microscope never reveals such changes as have been described above in the red cells; nor does the blood become so dark; and if the temperature reaches to 106°, it never remains at that point more than a few hours. The impression of this fever on the system, is so great, that it frequently takes weeks, nay months, to recover the normal strength. The effect of the poison on the blood, in persons who did not even suffer from febrile excitement, during the epidemic, has in many instances affected the health for months; and I have at this date, a patient who is subject to bilious attacks with fever, recurring once or twice a month ever since November, 1876.

TREATMENT.

Since the epidemic of 1858, I have been impressed with the belief that our yellow fever is a disease of malarial origin, and I have consequently held its most judicious treatment to be the same as that pursued in high grades of remittent fever. In 1876, when this fell disease summoned our medical staff to their best and most untiring efforts, this was the treatment I adopted in the first cases that came un-

der my care, and finding it good, I adhered to it to the last.

Whenever the patient presented that peculiar congestion of the skin, with a sluggish capillary circulation, his breathing quick, and complained of pains in the head and back, a hot mustard bath was ordered, he being covered with a blanket while in the bath, and the whole surface of the body well rubbed. The usual result of a single bath was a profuse perspiration, abatement of pains, diminution of breathing. He was then wrapped in the same blanket, laid in bed, and warmly covered in order to keep up the perspiration. If necessary a second or third bath was administered in order to obtain the desired result—improvement in the circulation. The heat of the body was furthermore allayed by frequently sponging the skin with warm water, to which alcohol in some shape was added for the purpose of increasing evaporation. The patient being for no purpose uncovered while in a moisture.

In case the stomach was irritable, warm water, or mustard and water, was given, and, its contents being disgorged, a mustard plaster was applied over the epigastrium. Just as soon as the medicine could be procured and the stomach could retain it, calomel, from 8 to 12 grains, was given. If perspiration had been obtained, quinine, 5 to 10 grains, and where restlessness was present without irritability of the stomach, Dover's powders, 6 to 8 grains. This either in three doses, two hours apart, or together in a single dose. In this case the quinine alone was continued in broken doses of 5 grains, until its effects on the nervous system and circulation were fully and unmistakably obtained. Four hours after taking the calomel a dose of castor oil, or where nausea was present, a Seidleitz powder was given. According to the necessities of the case the quinine was continued during two, three, or four days (or longer), *i. e.*, until the tem-

perature had been reduced to its natural standard, and the return of fever no longer to be apprehended. On the 2nd, 3rd, or 4th day, when the stomach would become irritable, all nourishment was prohibited, and cracked ice, iced carbonated water, and iced champagne were frequently administered—a spoonful or less at a time. Where the stomach was not irritable the only food allowed was beef extract (Valentine's) 10 to 15 drops in a spoonful of water, or a dessertspoonful of home-made beef tea, every two hours. When there was acid vomiting, accompanied by a burning pain in the epigastrium, neither nourishment nor any kind of medicine whatsoever, was administered by the mouth, and a blister of considerable size was at once put over the pit of the stomach.

Palliatives for nausea were often found in pellets of ice, small quantities of freshly drawn champagne on ice, or Seltzer water with the addition of a little saturated solution of bi-carbonate of soda. For sustenance, injections alone were relied on. These contained the yelk of one egg, one tablespoonful of home-made beef tea, or one teaspoonful of Valentine's beef extract, and 15 to 20 grains of sulphate quinine, all rubbed well together, in a little cooked starch, or white of egg, sufficient to fill a one oz. syringe, and were given about every four hours.

When this irritability of the stomach subsided feeding by the mouth was resumed, but with great care, lest a relapse should be occasioned by hearty or imprudent eating.

Relapses are not always indicative of imprudence, excess, or careless nursing. They yield generally to judicious treatment and careful nursing, and are, as a rule, less severe than the first attack. In some instances, where the disease appeared at first amenable to treatment, and a favorable issue was expected, owing to some cause, bad nursing, improper nourish-

ment, too free use of stimulants, or too much liquid of any sort, or something else, the fever would return with characteristic temperature; nausea, resulting in black vomit, would occur, and death might ensue on the 6th, 7th or 8th day.

Fatal results were sometimes deferred much longer, when a typhoid form set in, and in some instances where all of these symptoms were developed, the patient recovered.

In about two per cent. of the cases treated by me no remedies, or efforts of any kind, appeared to make the least impression on the disease. All the functions of life seemed to be paralyzed at the onset, and such cases would pass through the different stages of the fever until released by death on the 3d, 4th or 5th day.

Yellow fever is very quick in its ravages upon the human system, and promptness in its treatment is necessary to success.

The following table shows the general results of the above treatment:

Number of cases of yellow fever treated	615
Number of cases of intermittent fever treated	56
Numbes of cases of remittent fever treated	17
Number of cases of congestive fever treated	6
Number of cases of other diseases treated	120
Number of deaths by yellow fever	34
Number of deaths by other diseases	2
Number of deaths when treatment was begun within 48 hours of the attack	25
When under treatment after 3d day	6
Moribund when first seen	3
Number of cases where black vomit was thrown up	68
Number of deaths after black vomit	30
Without black vomit	4
Number of cases of relapse in yellow fever	51
Number of cases of relapse in intermittent fever	37
Number of cases of relapse in remittent fever	9
Number of cases with 2 relapses in yellow fever	2

Number of cases with 3 relapses in yellow fever	1
Number of cases with black vomit at relapse	3
Of which 2 died and 1 recovered.	
Cases with complete blindness on 4th day	3
Of which 1 recovered; 2 died in convulsions.	
Cases with convulsions on 3d or 4th day	4
All of which died.	
Cases of abscess in or on both parotids	4
All recovered.	
Cases with large abscess in hip and abdominal walls	2
Recovered 2.	
Cases with well marked hemorrhagic eruptions	4
Recovered 3; died 1.	
Cases with hemorrhage from bowels	9
Recovered 2; died 7.	
Cases with hemorrhage from gums, nose, ears	8
Recovered 6; died 2.	
Cases of complete suppression of secretion from kidneys	6
Recovered 2; died 4.	
Cases of labor whilst having the fever	2
Recovered 2.	
Cases of abortion during fever	4
Recovered 4.	
Cases of pregnancy without abortion (known)	6
Recovered 6.	

CONCLUSIONS.

Reading on the subject of yellow fever, had left my mind, like that of many other students, in the field of inquiry—still seeking for the truth, among conflicting opinions.

On the one hand, it is held to be a contagious disease, and of foreign origin. On the other, a non-contagious disease, and of local origin. Each side of the question is supported by able men, and strong arguments are adduced in favor of each.

Unhappily many writers adopt views which they ably maintain, without having employed the only means by which a correct knowledge of any subject can be obtained—

that of personal observation. Hence it occurs that able articles on this and like subjects do not always contain reliable information.

In 1858 I watched the progress of our yellow fever *on the spot.* I studied its symptoms and believed in its *local origin.* But it is only after my experience of 1876 and the investigations of the subject which I have since made that this belief has matured into a *conviction.*

Deeply imbued myself with the truth of the following propositions, I offer them for your deliberation:

1. That yellow fever can *originate* here under certain conditions of earth and air.

2. That the sanitary condition of the low lands surrounding the city, *is the most important factor* in the production of our yellow fever.

3. That *importation* is not necessary for its production, and, therefore, the strictest quarantine of ships, vessels or railroad trains will not prevent its recurrence in this place.

Finally, I repeat what I have urged before: "*Drainage* is the simplest, cheapest and surest means of preventing *paludal fevers,*" or to use the words of the committee of the State Board of Health: "The low grounds surrounding the city as with a cordon of malarial influences, should be thoroughly and systematically drained, at whatever cost."

Quarantine should be abolished "as but a relic of dark ages," and for it, should be substituted *modern scientific disinfection*, which, in a few hours, will remove all causes of infection from any ship or closed vessel without hampering commerce.

Modern hospitals should be provided in a suitable locality for the reception of sick and infected persons.

NEURALGIA, AND ITS MODERN THERAPEUSIS.

BY JAMES B. BAIRD, M.D., ATLANTA.

Neuralgia, a term of comparatively recent introduction into medical nomenclature, signifies simply nerve-pain.

Strictly speaking neuralgia is not a disease, but merely a symptom of some primary lesion involving the integrity of a sensory nerve at some point in its course. Yet, the name possesses the negative merit of conveying no erroneous impression relative to the etiological or pathological nature of the affection which it represents, and for the sake of convenience, pain, the most constant and important symptom of the disorder, is, by common consent, treated of as a disease *per se.*

The *clinical history* of neuralgia is the history of a pain of variable intensity, kind, situation and duration. Its access may be sudden, or, as is generally the case, preceded by various premonitory symptoms, as sensations of weight, heat, fatigue, twitching, etc., in the part affected.

The pain is always distinctly paroxysmal, being characterized by the occurrence of intermissions or remissions, and it ranges in severity from an occasional twinge to an excruciating and all-absorbing flood of agony.

The symptom under review is purely a subjective one, and patients describe the character of the pain as boreing, tearing, cutting, burning, darting, etc.

The last, namely the lancinating pains, are experienced during the height of a paroxysm, and shoot in the direction of a nervous trunk or its branches, so that persons utterly ignorant of anatomical relations are thus enabled to trace with accuracy the track of the nerve in describing the course of the pain.

Any sensory nervous trunk, fibre or filament may be the seat of neuralgia, and individual forms are designated, according to the classification of Valleix, which is substantially correct, as follows:

(*a.*) Neuralgia of the fifth pair or facial neuralgia.
(*b.*) Cervico-occipital neuralgia.
(*c.*) Cervico-brachial neuralgia.
(*d.*) Dorso-intercostal neuralgia.
(*e.*) Lumbo-abdominal neuralgia.
(*f.*) Crural neuralgia.
(*g.*) Sciatic neuralgia.

To this catalogue may, with propriety, be added the various visceral neuralgias.

Tenderness on pressure is usually observed to exist in a marked degree at one or more circumscribed points over the course of the affected nerve, and Valleix has shown that these "points douloureux" are situated where the nerve escapes from a bony canal; over branches distributed to the integument; at the terminal extremity and in superficial situations.

The duration of an attack varies within wide limits. It may end spontaneously, or as the result of appropriate treatment, after a brief series of more or less severe paroxysms, lasting only a few hours, or it may be protracted for days, weeks, years, or even a life-time, uninterrupted save by intermissions or remissions of indefinite length.

An attack is not accompanied by fever, or any notable constitutional disturbance, and it may not impair the func-

tions of the organs to which the affected nerve is distributed; occasionally, however, congestion of the neighboring parts, and excessive glandular secretion are observed among the morbid phenomena. Twitchings, fibrillary contractions and spasmodic movements of the muscles sometimes occur, constituting the tic epileptiform variety of Trousseau. I have seen the most atrocious paroxysms of pain in this form of facial neuralgia excited by the lightest touch with the corner of a cambric handkerchief.

The *causes* of neuralgia are multiform, but the precise *modus operandi* by which the effect is produced is, in the present state of our knowledge, as uncertain as the nature of the effect itself.

Among the agencies recognized as sustaining a causative relation to this affection are hereditary influence, acquired predisposition, age—it is rare in childhood, the periods of adolescence and of middle life, or as they are sometimes denominated the sexual periods, are peculiarly liable to attacks, and certain of the most formidable varieties of the disease exhibit themselves by preference in persons of advanced age, as remarked by Anstie after the powers of life begin to decline. Sex appears to exercise no influence over neuralgia in general, but certain forms seem to exhibit an elective affinity for the one or the other; for instance, while intercostal neuralgia is more frequently encountered in females, sciatica is, by a sort of poetic justice, far more common in males, and thus the law of compensation is observed, and the balance, in the aggregate, is established between the two.

Traumatic and mechanical irritations are unquestionably frequent sources of neuralgia. Among the latter are included tumors, hypertrophy of peri-neural structures, œdema, inflammatory products, periostitis, or any other cause capable of exerting pressure on a sensory nerve.

Anæmia, from whatever cause induced, unremitting application, intense mental excitement, profound emotional disturbance, exhausting diseases, exposure to cold, lead poisoning, syphilis, climate, season, weather and manner of life—in short, any circumstance or condition that diminishes the powers of the system, may act as a direct exciting cause of neuralgia.

On this point, Dr. Francis E. Anstie,* of London, says: "It is universally the case that the existing condition of the patient, at the time of the first onset of the disease, is one of debility—either general or special." Again, he says†: "I have never seen a case of neuralgic pain in which there was not marked evidence of nervous debility, either local or general." And‡ "every temporary depressing influence directly predisposes to an attack of acute pain."

But in my experience by far the most frequent cause of neuralgia and one that is often overlooked is malaria. This remark applies with especial emphasis to the facial variety, and also to that manifestation of the disease popularly known as brow-ague or sun-pain, but it is by no means restricted to neuralgias of the fifth pair. When arising from this cause the paroxysms frequently observe the same laws of periodicity that pertain to the history of malarial fevers, but undoubtedly in a large proportion of cases this distinctive feature is wanting, the symptoms present no indication pointing to malarial infection as the source of the attack, and evidence of the probability or possibility of this origin—in the absence of pathognomonic signs—must be sought in the history of exposure in each individual case.

I desire to lay especial stress on this assertion and to reit-

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*Reynold's System of Medicine, vol. II, p. 717.

†*Ibid.* vol. II, p. 718.

‡*Ibid.* vol. II, p. 719.

erate the emphatic statement that marsh miasm is the *fons et origo* of many of the most violent and intractable forms of this distressing malady—a correct appreciation of which fact is essential to their successful management. I have within a year treated a gentleman, the subject of the most excruciating paroxysms of facial neuralgia that I have ever witnessed—the true tic epileptiform variety of Trousseau. He had expended much time and money in seeking relief without benefit, his life was rendered a burden and an unwelcome possession, his happiness was gone, his general health shattered, his form emaciated, his business abandoned and his hope of release was fast yielding to despair.

The history of his trouble was traced back sixteen years. The initial attack occurring, co-incidently with other evidences of malarial poisoning, while in the discharge of his duties as an officer in the Confederate States army in Florida.

All narcotics, the excessive use of which had become a habit, were, at once, discontinued, and appropriate treatment, based upon the malarial theory of its origin, was immediately inaugurated.

Rapid improvement ensued, the paroxysms became less frequent and less severe, he increased in weight, regained his spirits, resumed business with renewed energy, and in a few weeks every vestige of the tyrant that had, for sixteen years, rendered his very existence miserable, had vanished.

Nearly twelve months have now passed and there has been no relapse. Let us unite with the rescued man in the hope that the strongholds of his old enemy have been abandoned forever.

I could report other cases of a similar nature, but this story, briefly told, sufficiently illustrates the idea I desire to impress, namely, the potency of malaria as a cause, and its influence in many obscure forms of this affection.

The *pathology* of neuralgia, notwithstanding the improved methods of histological investigation, and the patient and laborious attempts that have been made during the last century to fathom the mysteries of its nature, remains to-day involved in an impenetrable cloud of doubt and uncertainty.

It is true, says Professor Erb,* of Heidleberg: "In many cases it is referable to very definite and well recognized injuries, but in just as many others the causes are obscure, and can only be guessed at, in all cases, however, the more intimate relations between cause and effect are hypothetical."

The same writer continues: †"We cannot possibly expect to meet with coarse anatomical changes; a nerve may at one time be in a state of most violent excitation, whilst the very next instant it may be performing its functions in a perfectly normal manner. . . . It is hence more than probable that the coarse anatomical changes so frequently found are not the essential features of neuralgia, and Anstie is quite justified in stating that the anatomical changes are simply accidental, and are only rarely to be regarded as factors in the production of neuralgia. The conditions that have hitherto been discovered may be given in a few words: They consist in flattening and atrophy of the nerves, a degeneration of the nerve fibres, swelling and hyperæmia, inflammation and thickening of the neurilemma, dilatation and tortuosity of both the arteries and veins of the nerve trunks, and cicatricial indurations and growths in them.

The great number and variety of the morbid changes that have been discovered is sufficient evidence that they are not essential to neuralgia, whilst, in many cases, the most careful investigation has failed to indicate any changes at all; at the same time it must be acknowledged that the negative

*Cyclopædia of the Practice of Medicine—Ziemssen, vol. xi. p. 22.
†*Ibid.* vol. xi, pp 33, 34.

result of such an examination by no means proves that the slighter or more transient morbid changes may not have existed during life, (as, for example, hyperæmia, slight exudation, œdema, and the like,) and, in particular, does not disprove the opinion expressed by several observers, that slight neuritis is at the bottom of all neuralgiæ."

He concludes—First: "That neuralgia is something essentially different from the sensory impressions caused by the immediate action of stimuli on the nerves."

Second: "That the most diverse etiological influences always induce the same changes in the nerve."

Flint* summarily disposes of the whole subject by declaring: "All that can be said of the pathological character of this affection is, it consists in a perversion of sensibility."

Rindfleisch,† in a chapter devoted to abnormalities of the nervous system affirms: "The more we were formerly at pains to trace back to anomalies of the ganglion-cells and nerve-fibres, particularly the mental disturbances and other essential neuroses, so much the more surely may we now assert the thesis, based upon the negative results of all these investigations, that the causes of perhaps all nervous diseases are to be sought for in anatomical disturbances of the non-nervous constituents of the system."

Prof. Wm. A. Hammond‡ writes on this subject not much can be said "without entering the domain of pure speculation. I may, however, state my opinion that neuralgia, not directly the result of some physical cause interfering with the integrity of the nerve in which it is situated, is almost invariably induced by a depressed state of the system."

If we examine closely the facts pertaining to the anatomi-

*Flint's Practice of Medicine, 3d edit., p. 681.

†Text Book on Pathological Histology, p. 615.

‡Diseases of the Nervous System, 6th edit., p. 833.

cal characters of a neuralgic nerve, not only as set forth in the above extracts from the writings of well known authorities, but upon the testimony of all trustworthy histologists, we shall soon discover our ignorance of the essential deviations from the normal standard of the sensory nervous apparatus, and shall be forced to admit that these changes are inaccessible with our present means of investigation. We must, at present, therefore, content ourselves with the knowledge that the pathology of neuralgia consists in an abnormal condition of a sensory nervous trunk, fibre or filament at some point in its course, the essential nature of which we do not understand, but the most constant and important symptom of which is pain.

It is idle then to speculate upon the possible structural changes that may give rise to this affection. It is wiser far to wait patiently while we seek diligently than to attempt the erection of plausible theories upon hypothetical bases.

The *diagnosis* of neuralgia is usually sufficiently easy. Attention to the points grouped under the head of clinical history will generally dispel any embarrassment in arriving at a definite conclusion. The principal points to be borne in mind are the localization of the pain to the course of a sensory nerve or its branches; tenderness upon pressure over certain circumscribed places upon the surface; the varying intensity or the intermission of the pain; the shifting of the pain from one sensative nerve to another; the absence of symptoms denoting disease of the central nervous system, of inflammatory or structural lesions in neighboring parts, and of any notable impairment of the general health. It is not sufficient, however, in arriving at a diagnosis to establish the existence of a nerve-pain. Investigation should be pushed towards ascertaining the probable or possible cause of the attack, and just here much difficulty will frequently be en-

countered, yet it is often of the utmost importance, both to the welfare of the patient and the reputation of the physician, that searching inquiry should be prosecuted in this direction, for I am persuaded that in a large proportion of cases persevering endeavor will be rewarded by success; an occasional error, and one that should be studiously avoided, is the mistaking of a pain in a spinal nerve, due to some disease of the cord, for simple neuralgia. Several cases in which this blunder has been committed have recently come under my observation, but as our knowledge of diseases of the spinal cord is becoming more and more complete, and our means of interrogating this organ more and more perfect, these sources of error will gradually be eliminated.

The *prognosis* depends upon our ability to remove the cause, and in a large measure upon the variety of the affection with which we have to contend.

So far as the life of the victim, and the alleviation of any given paroxysm is concerned, it is absolutely favorable; as to the relief of a particular attack or safety from recurrence it is very uncertain, for the data upon which conclusions are to be based are by no means ordinarily trustworthy, and at present only this much can be said: a large proportion of all cases, under proper treatment, recover; many can be benefited; and some, it must be admitted, are incurable.

To the latter unhappy class belong pre-eminently those melancholy cases of virulent facial neuralgia not infrequently encountered among aged persons.

The *treatment* of neuralgia may be general, or constitutional and local; and, in the outset of its consideration, it may be laid down as a fundamental proposition that the physician who most carefully investigates the origin of his cases, and most judiciously selects and applies his remedies in accordance with the results of a faithful and intelligent

examination into the probable cause of each attack, will achieve the most satisfactory measure of success in the management of this oft-times refractory affection.

The relief of pain, and the removal of the cause of the attack, are the objects sought to be effected.

To accomplish this consummation devoutly to be wished, the physician must possess a complete mastery over all the means of cure at his disposal, and as these resources have been increased and rendered more accurate, of late years, I deem a somewhat extended review of the *armamentarium medicorum neuralgiæ* not inappropriate at this time.

It is unnecessary to dwell upon the prophylaxis of this malady. The importance of such measures are, at a glance, apparent. When once any agency has been discovered by experience to act as an exciting cause, ordinary prudence should dictate avoidance of that source of irritation in the future. Hereditary tendency should be counteracted by maintaining a high standard of physical health—an end to be attained by the use of abundant and nutritious food, and the employment of all those means described by the term hygienic.

When the cause of neuralgia can be traced to mechanical agencies amenable to surgical interference, removal should be practiced, provided always that no surgical principle need be violated. And just here I desire to say that the history of division or excision of a portion of the affected nerve has not accorded such results as to warrant its recognition as an approved therapeutic procedure, and, from our present standpoint, the operation should be discountenanced.

It would indeed be a laborious task to mention in detail all the remedies that have been from time to time extolled in the treatment of neuralgia, and I shall not essay the attempt, but shall content myself by referring to those means of cure which are regarded as the most satisfactory

and efficient in this the eighth decade of the nineteenth century.

After a careful scrutiny of a case, if evidences of lead poisoning or syphilitic infection are discovered the remedies recognized as curative in these affections should be administered. The iodide of potassium is pre-eminently valuable in such cases, and to obtain its full effect the doses should be large and its use protracted.

It will be observed in most cases, it matters not what may be the special exciting cause, that anæmia is present, and this symptom independently of other indications, demands appropriate measures of treatment. Iron in small doses, but continued for a long time, is the specific remedy. Some authors advocate the exhibition of enormous quantities, some prefer one preparation and some another. It is my belief that the excessive doses recommended are neither necessary nor expedient, and that neither the sub-carbonate nor the tincture of the chloride, or any other particular form, possesses decided advantages over many other forms, but that the preparation which is most acceptable to the stomach, in each individual instance, should be employed, and my opinion is that advantage is occasionally had by changing in a given case from one ferruginous preparation to another.

Under the head of causation great stress was laid upon the influence of malarial infection as a source of neuralgic affections, and particular attention was invited to the fact that malaria may be the cause of an attack when the ordinary diagnostic criteria of malarial poisoning are wanting. So common do I believe this origin to be that, I do not hesitate to advise the treatment appropriate to this condition—in the absence of other discoverable causes—even when no exposure to miasmatic emanations can be directly traced.

For the purpose of liberating the system from the thraldom of this hydra-headed enemy, we are fortunately in possession of two reliable remedies—quinine and arsenic. The former alone will often prove efficacious.

In cases of chronic neuralgia, as in chronic intermittents, the best results are achieved by the administration of moderate doses of the drug—short of producing cinchonism—for a period of six or eight weeks, though it sometimes becomes necessary, to obtain the desired effect, that it be exhibited in large doses—twenty to thirty or forty grains daily—and continued for a week or ten days without intermission.

It must not be understood, however, if relief is secured by means of quinine, that this circumstance establishes the fact of malarial origin or malarial complications, for there is every reason to believe that quinine is frequently an efficient remedy when no such influence obtains.

Failing with quinine, arsenic should be tried, and to be fully tested, it must be carried to the extent of producing some of its characteristic toxic effects. I am in the habit of commencing with the administration of four drops of Fowler's solution, *per orem* thrice daily, increased by one drop at each dose, every alternate day until the *œdema arsenicalis* is produced. This, in my experience, generally ensues when the doses amount to twenty or twenty-two drops each. When this point, is reached its exhibition should be suspended for a few days, until all traces of its toxical action shall have disappeared, then it should be resumed, and the same process repeated over and over again, and continued at the discretion of the physician.

Notwithstanding the position assumed by many able medical authorities, to the effect that the employment of arsenic after the failure of quinine, is useless, I have, in numbers of cases, secured relief with arsenic, administered as indicated

above, when, in the same individuals, quinine faithfully tried, had in my hands, proved utterly impotent to arrest the paroxysms. Before dismissing the consideration of this branch of the subject, I desire to add that, during the employment of arsenic after the manner designated, quinine, in moderate doses, will be found a valuable adjunct to the treatment.

The superior advantages derived from the hypodermic use of arsenic—Fowler's solution, diluted with an equal amount of water—is insisted upon by Hammond and others, but in my hands its administration in this way, notwithstanding the adoption of every precaution, has been attended by such serious local disturbances as to render its early discontinuance necessary.

Opium is an indispensable remedy in the treatment of neuralgia. As a palliative it may be employed with absolute certainty, and when given during a paroxysm of pain, illustrates in a striking and gratifying manner the practical resources of medicine. As a curative agent it is not infrequently resorted to with success. The most efficient method of administration is the hypodermic injection of a solution of morphia. I have been unable to detect any special advantage from introducing the injection at the seat of the pain. Apart from the very trifling consideration of acupuncture and slight counter-irritation, I believe it is *nil.* The pain caused by a puncture into the super-sensitive integument and the disfigurement, when required about the face, especially in ladies, far out-weighs any considerations of supposed superiority of this over other points of insertion. The benefit obtained, in my decided opinion, is not due to the local effect. It is not the result of an impression made upon the terminal extremities of a sensory nerve that brings relief. The anodyne must be absorbed and exert its influence through its benumbing properties upon the nerve

centers themselves, both by lessening the acuteness of the perceptive faculties and by diminishing the conductive capacity of the afferent nerve fibres. The chief advantages attributable to this mode of using morphia are, I think, due rather to the suddenness of the impression produced, the promptness of its action, the avoidance of digestive and other disturbances and the smaller quantity of the drug required to produce a given effect.

One serious drawback to the value of the opium treament exists—namely the liability, on the part of the patient, of becoming habituated to the use of the drug. This source of danger should always be borne in mind and every precaution against so harmful a practice, mentally, morally and physically, should be instituted.

Alcohol, in the form of spiritous liquors, in the incipient stages of a certain proportion of cases, seems to cut short the attack. It is certainly worthy of a trial when not contra-indicated. The well known benumbing properties of the bromide of potassium causes it to be esteemed highly as a palliative or curative means in some cases of the affection.

Of the local means of treatment that can be recommended, the most important are the repeated application of blisters, the actual cautery, mild counter-irritation, warm fomentations, anodyne preparations, and lastly, because it is of the first importance, I desire to invite careful attention to the claims of galvanism. I do so the more fully and more confidently for the reason that this, the most valuable resource in the whole catalogue of remedies for the treatment of neuralgia, is absolutely unknown to many practitioners, and totally disregarded as a therapeutic agent, by the great mass of physicians throughout this state.

In addition to what I shall have to say on this subject, the testimony of several eminent men, celebrated alike for ability

and integrity, will be offered, that in the mouths of two or three witnesses every word may be established.

Nothing need be said here relative to the employment of the first named local remedies. Their use is familiar to all. A minute reference to them, at this time, is uncalled for, and will be omitted.

Professor Erb* says: "The resources for relieving pain have undoubtedly been increased in number of late, and at the same time rendered more precise. There are three groups of remedies that occupy the foremost place in the treatment of neuralgia as being most effective.

"1. Electricity in its various forms;

"2. The narcotics, especially when applied hypodermically; and

"3. Certain nervine specifics."

Mark the order in which these are enumerated.

He continues:† "Electricity has recently become the most important remedy in the treatment of neuralgia, from the brilliant success that has attended its application in all the different forms of the disease. Its mode of action is still obscure, though it probably varies in different instances. It diminishes the excitability of the sensory nerves, it takes away abnormal stimuli from them, it modifies their nutrition, allays hyperæmia and inflammation, and, lastly, acts as a derivative, and thus fulfills several indications.

"The methods of applying it are manifold, especially since the introduction into practice of the galvanic current by Remak. The results of electro-therapeutic treatment are in no other disease so certainly established as in neuralgia. Of the two kinds of electricity now in constant use, the galvanic current is found to be more active, and appli-

*Cyclopædia of the Practice of Medicine—Ziemssen, vol. xi, p. 78.

†*Ibid.* vol. xi, p. 78.

cable to a greater variety of forms of the disease than faradic electricity. . . . The results are sometimes astonishing, so quickly do they appear. In other cases, however, it is necessary to persevere in this mode of treament for a long time, and with great regularity, before a cure is effected."

In speaking of the treatment of neuralgia of the fifth pair, the same author says: * "Electricity has recently gained a conspicuous position. Cases are on record in which success has been obtained by its means, although the most severe operative procedures had been previously adopted without effect; and it may fairly be said that it is essentially owing to the extention of electrical methods of treatment that the prognosis of true tic-douloureux is no longer so hopeless as Trousseau represented it to be."

Again, in detailing the most approved treatment for cervico-brachial neuralgia, he says:

† "I place electricity [galvanism] in the foremost rank in the direct treatment of this affection, the result of its application being in most cases very satisfactory."

Further on in the same chapter he says:

‡"A knowledge of the extreme value of electricity [galvanism] as a curative agent in sciatica is of recent date, but it has been carefully investigated. It deserves to be tried in all severe cases, and especially when it is found practicable in slight and recent cases; the results in most instances being excellent.

Another witness, Dr. Moritz Meyer, of Berlin, testifies:

¶ "In more recent times two other remedial agents have

*Cyclopædia of the Practice of Medicine—Ziemssen, vol. xi, p. 121.

†*Ibid.* vol. xi, p 150

‡*Ibid.* vol. xi, p. 181.

¶ Electricity in its relation to Practical Medicine—3rd German, 2nd American edition, p. 305.

been brought into use which are at once more easy of application and more effective than those already named. These are electricity and hypodermic injections. But while the latter, as A. Eulenberg says, may be used with almost absolute certainity as palliatives, and in many cases as radical cures, yet electricity, on the other hand, affords, in by far the greatest number of cases of peripheral neuralgia, a satisfactory means of treatment."

The following extracts from Niemeyer's excellent work on the practice of medicine gives the estimate that the distinguished author places upon the remedy under review.

He says: *Among the most effective modes of treatment is electricity." †"Many cases of neuralgia which had been previously treated without benefit by the most varied remedies were completely and permanently cured in from twelve to twenty applications. I am fully convinced that the introduction of the galvanic current into practice, is one of the most valuable advances of modern times, and that in the constant [galvanic] current we have a means more powerful than any other of modifying the nutritive condition of the parts that are deeply situated." He then proceeds to report ‡two cases of facial neuralgia cured by the use of the constant galvanic current. One was of thirty years' standing, and upon the other eleven operations, some severe ones, as the ligation of the carotid artery, resection of the superior maxilla, etc., had been uselessly done, and he continues: ¶"Even in the most obstinate cases of sciatica the induced and still more the constant [galvanic] current of electricity rarely fails."

*Niemeyer's Practical Medicine. Translated from 8th German edition, vol. ii., p 287.

†*Ibid.* vol. ii, p. 290.

‡*Ibid.* vol. ii., p. 295.

¶*Ibid.* vol. ii, p. 306.

Dr. Anstie,* the celebrated neurologist of London, relates his experience with the remedy in the following words:

"The constant current [galvanism] is a remedy for neuralgia unapproached in power by any other except blistering and hypodermic morphia, and the latter is often surpassed by it in the permanence of its effects, while it is applicable in not a few cases where blistering would be useless."

Coming across the Atlantic, we find Prof. Wm. A. Hammond† offering emphatic endorsement of its efficacy. After recounting a great variety of approved methods of treatment, including morphia, hypodermically, he adds: "But above all means, not only for relieving the pain of any particular paroxysm, but also for effecting a permanent cure, electricity stands first. I have employed it in almost every possible form, and am satisfied that the primary [constant] galvanic current is the preferable agent. . . . .
I have cured a number of severe cases of nearly every kind of neuralgia by the aid of electricity when other means had entirely failed. I rarely, however, employ it without, at the same time, insisting on such constitutional treatment as the case seems to require."

Again, Beard and Rockwell‡ write:

"The success achieved by electrization, in the treatment of neuralgia, has been brilliant and remarkable, and would be sufficient in itself to entitle electricity to a permanent and indispensable position among modern remedies. The pain is frequently relieved in the midst of the application, ... and, in some cases of a peripheral character is frequently dispelled by one or two applications."

The testimony that has not been cited is abundant, but I deem it unnecessary to adduce further evidence. The wit:

*Neuralgia, etc., p 200.

†Diseases of the Nervous System, 6th edition, p. 836.

‡Medical and Surgical Electricity—2nd edition, p. 471.

nesses introduced are unimpeachable. Their character and standing are unchallenged. Their testimony is conclusive. It cannot fail to command respect and confidence.

After several years of attentive observation and close study of the application of electricity as a remedial agent, I am able to indorse, without reservation, the opinions quoted above. As to the form of electricity that should be employed in the treatment of neuralgia, there is in my mind no question. Galvanism is inestimably superior to faradism, and, as a rule, the constant current should be used, though occasionally the interrupted galvanic current acts well. A very fine faradic current may be useful in some cases of hyperæsthesia; but, in my experience, it is in these cases, very rarely of value, and by the muscular contractions which it necessarily excites is frequently harmful, increasing rather than allaying the irritability of a sensitive nerve. Yet—and it is a painful thought—how often do we see accomplished physicians, who ought to know better, armed and equipped with a redoubtable electro-magnetic machine valliantly assail the victim of a formidable neuralgia. As a matter of course in the vast majority of cases, failure to dislodge their foe, is the result—the legitimate result. But what recks it, they "have tried everything—*even electricity*," and then, after an ignominious defeat, but with a self-appeasing conscience, they sit themselves down, consoled with the comforting reflection that electricity is an unmitigated humbug, and without hesitation they complacently assign it a place among the "Superstitions of Medicine!"

But facts are stubborn things, and when indisputable results are arrayed before their reluctant vision, they, discomfited, with one accord, send forth the lusty chorus, "*Post hoc, sed non propter hoc.*"

To this class of persons I desire to say, that it is not the

use, but the discriminating and intelligent use of electricity that crowns skillfully directed effort with success.

The entire science of electrology is not compassed by the ability to hold two sponges upon the surface, but the science must be mastered and the art must be cultivated, before the expectation of achieving the best results can be reasonably entertained.

That the use of electricity in the treatment of disease, will ever become co-extensive with its merits, there is little reason to believe. The expense of providing requisite apparatus, the time and knowledge indispensable to its proper application, and the skill demanded in caring for and manipulating the instruments, all militate against its general introduction as a therapeutic agent.

That this is to be deplored, all who realize the benefits which accrue from its use, must admit, for I do not entertain a doubt but that within the limits of this state alone there are vast numbers of individuals whose very existence is rendered miserable by this harrassing and terrible scourge, who would in galvanism, if it was available, find their salvation.

CONCLUSIONS.

1. Neuralgia, literally considered, is not a disease, but a symptom of some unknown pathological state of a sensory nervous trunk, fibre or filament.

2. It is characterized by attacks of pain of greater or less intensity, frequency and duration.

3. The pain is paroxysmal, being marked by more or less complete and protracted remissions or intermissions.

4. The causes of neuralgia are numerous, but the most frequent cause, in the opinion of the writer, in this country at least, is malaria.

5. Its essential pathological nature is unknown.

6. The diagnosis as to the existence of the affection is ordinarily sufficiently easy, though the attempt to trace its origin, is frequently attended with much difficulty.

7. The prognosis depends upon the cause and our ability to remove it by the means of treatment at our disposal.

8. The treatment should be constitutional and local.

9. The general treatment should be directed, as far as our knowledge or suspicions will warrant, against the cause of the attack. It should be persevered in with a view of removing any supposed taint or infection that may exist, and of augmenting the powers of the system.

10. Apart from any constitutional therapeutic indications, electricity and morphia hypodermically are the most reliable remedies that we possess.

11. Galvanism is by far the most efficient form in which electricity can be administered.

12. To secure the best attainable results, galvanization must be used intelligently, and, in many cases, perseveringly.

REPORT OF ONE HUNDRED AND THIRTY OPERATIONS FOR STRABISMUS.

BY A. W. CALHOUN, M. D.,

Professor of Diseases of the Eye and Ear in the Atlanta Medical College.

All will agree with me, that there is no deformity so conspicuous as a "cross eye," and I will make the assertion that no deformity yields more readily to the operative management of the surgeon, than the ordinary strabismus or squint which every practitioner of medicine so often meets in his every-day practice. It is needless to mention that it is a frequent disease, for almost every community in the land, be it large or small, furnishes a greater or less number to demonstrate that it is no uncommon occurrence, and even children easily recognize its existence, and instinctively, almost, give it its proper name.

Amongst these one hundred and thirty cases are all ages, from the infant, nine months old, to the old man, sixty-five years old, also both sexes and both races, the white and black. It is a singular fact, that of this number of cases, only three have occurred amongst the blacks, although the whole number of operations have been made upon those who live in the midst of the densest portion of the black population of the South. Indeed the negro is comparatively exempt from the disease, the reason for which will be given when we come to speak of the causes. Between the

ages of one and twenty years there were ninety-four cases—between twenty and sixty-five there were thirty-six cases. These figures simply add another proof of the fact, that strabismus or squint is a disease peculiar to childhood, and in more advanced life we meet with it comparatively seldom, because persons thus affected in early life, in a very large majority of cases, are by the surgeon relieved of the deformity before they attain their majority.

Sex seems to have had but little or no influence in bringing about the disease, there being very nearly an equal number on each side, viz: sixty-eight females and sixty-two males. I know of no reason why it should occur more frequently in the one sex than the other. It takes place also about equally often in the one as in the other eye. But not so with regard to the muscle affected. Of the one hundred and thirty cases, one hundred and sixteen were convergent or internal squint, involving the internal rectus muscle of one eye, and sometimes of both. Only fourteen involved the external rectus, constituting divergent or external squint. It is rare that we find any other form of the disease than as just mentioned, but occasionally there is a contraction of the superior rectus muscle, drawing the eye upwards, or, when acting with the internal rectus, drawing it inwards and upwards. There were two of these cases.

This tendency on the part of the internal rectus muscle to contract so much more frequently than the external, is mainly due to that anomaly of the refractive power of the eye, known as hypermetropia or over-sightedness. In this condition, the ball is congenitally too short, and the rays of light falling upon the eye, and passing through the pupil, do not come to a proper focus upon the retina. This causes an undue exertion on the part of all the muscles of the ball, but especially of the internal rectus, which contracting,

turns the eye inwards, constituting convergent squint. The most common form of congenital derangement of the refractive power of the eye, is this *too short* condition of the ball (hypermetropia), and for this reason we almost always find children affected with the convergent variety of "cross eyes." Where divergent or external squint exists, it is most frequently due to the opposite form of refractive derangement, known as myopia or near-sightedness, in which the rays of light focus in *front* of the retina, on account of the ball being *too long.* In the effort of the ball to regulate this deranged focalizing power of the eye, the *external* rectus contracts and turns the ball outwards. Indeed, so almost universally does strabismus depend upon these two anomalies of refraction, that with almost unfailing certainty, we can say, when we see a person affected with internal squint, that he is over-sighted, and if with external squint, that he is near-sighted.

Now, it is so extremely seldom that we find negroes affected with either over-sightedness or near-sightedness, that it may be asserted as a fact, that they are in a manner free from both. Hence they are rarely found to have strabismus of either the internal or external variety.

While the causes just mentioned are *mainly* concerned in the production of strabismus, there are others that occasionally bring about the same result; such as central opacities of the cornea, central capsular cataract, paralysis of one or more of the muscles of the eye, various inflammatory conditions of the ball, and so on. It has been supposed that infants "contract the habit" of strabismus (cross eyes) by holding toys close to their eyes and watching them for a long time, looking intently at their fingers while held in the mouth, and so on, but the correctness of this is to be doubted, to say the least of it.

Children affected with "cross eyes" should be operated upon as soon as the contraction of the muscle becomes permanent. The advice often given to parents by physicians, to let the child alone till it "grows up," is very erroneous and full of danger to the vision of the "crossed" eye. After the eye becomes permanently turned inwards or outwards, and remains so for awhile, on account of the non-use of the optic nerve and central portion of the retina, the perceptive power of the latter begins to fail, and ultimately the person is able to see objects only *indistinctly*, even when held close to the eye. This is almost an invariable result. In operating early, the child is not only spared the mortification of so conspicuous a deformity, but the vision is protected from the least impairment.

The double vision (diplopia) that is so annoying to older persons in the beginning of strabismus, does not continue very long either with them or with children, for instinctively they soon learn to disregard it.

The only treatment for strabismus, is an operation upon the offending muscle. All other modes of treatment will utterly fail, no matter how persistently persevered in. The use of prismatic glasses will often overcome the diplopia resulting from "*insufficiency*" of the internal or external rectus muscle, but nothing short of cutting a permanently *contracted* muscle will bring the eye into its proper position.

Before operating, it is always well to measure the degree of strabismus, that is, the deviation from the proper direction that exists in the "crossed" eye. This is best done by measuring from the inner canthus of each eye to the centre of the corresponding pupil. The difference between the two measurements is the degree of deviation. If this deviation is no more than two or two and a half lines,

a simple operation upon the one eye will, in all probability, suffice—if, however, it is three or more lines, an operation upon both internal recti muscles will be necessary to bring the eyes straight.

The operation itself is simple, requiring the conjunctiva to be caught up by a pair of forceps and cut by a pair of scissors, a little in front of and parallel with the insertion of the muscle into the sclerotic. Raising the edge of the wound, the scissors are passed under, and the sub-conjunctival tissue over the muscle is freely divided. Then a tenotomy hook is passed underneath the muscle and its insertion into the ball *entirely* severed. This should be done very thoroughly, for if any fibres of the muscle remain uncut, the operation will not be a success.

If the muscle contracts sufficiently, and re-attaches itself to the ball far enough back, no farther interference will be necessary—otherwise the operation will have to be repeated.

I rarely give chloroform in this operation, except in cases of children, because of there being comparatively little pain, and because, moreover, the assistance of the patient is oftentimes very desirable.

There is no reason why the operation should not *invariably* succeed, but essential to success, are persistence and a thorough understanding of the anatomy of the parts by the surgeon, and a great deal of patience on the part of the patient. With these requisites, even the very worst cases can be readily cured.

It sometimes happens that after cutting the tendon of the internal rectus muscle, the external rectus fails to bring the ball perfectly straight, thus leaving still a very slight degree of squint. In such instances, if there is no special contra-indication, the external rectus can be materially aided and the minute deviation completely corrected, by passing

a silk thread through a small portion of the conjunctiva, close up to the outer corneo-sclerotic junction, and drawing it sufficiently tight to straighten the eye, fastening it to the temple by adhesive plaster, or tying it behind the corresponding ear. The thread irritates the eye very little if at all, and will cut through the conjunctiva in the course of twenty-four hours. The object of it is, to hold the eye in its proper position until the divided internal rectus tendon re-unites itself to the ball, which occurs within a comparatively few hours.

The question is often asked, "is there much danger of the eye turning *too far* in the *opposite* direction, after cutting the contracted muscle?" If the operation is properly made, this rarely occurs, but now and then it takes place, notwithstanding the most careful and skilful treatment. But this accident should not annoy the operator, for it is at once corrected by putting a suture (unraveled silk is borne without trouble by the eye) in the conjunctival wound (which ordinarily heals by granulation), and drawing the edges firmly together. Should this procedure not succeed, simply wait till the eye has thoroughly recovered from the first operation, then divide the tendon of the *external* rectus, and this annoying "*turning out*" of the ball will be immediately overcome.

In those cases in which the strabismus is due to paralysis of the opposite muscle, after giving the ordinary remedies for the relief of the paralytic condition a fair trial, the operation known as "advancement" is to be made. This is done by first cutting the *contracted* muscle, as has already been described, then separating the paralyzed muscle from its insertion to the ball, and bringing it forward and attaching it by means of silk sutures to the under-surface of the conjunctiva at the corneo-sclerotic junction. This prac-

tically shortens the muscle and gives it strength. It is a very tedious and painful, but a very successful operation.

The absence of all danger and the great benefits to be gained by the operation, both in a cosmetic and visual point of view, should induce every one affected with strabismus, to submit to it without delay.

REPORT OF THE SECTION ON GYNÆCOLOGY FOR THE FOURTH CONGRESSIONAL DISTRICT.

BY A. W. GRIGGS, M. D., WEST POINT,
Emeritus Professor of the Principles and Practice of Medicine, in the Atlanta Medical College.

ACUTE SUPPRESSION OF THE MENSES.

Of all the cases of menstrual disorder which we are called upon to treat, we believe that acute suppression is by far the most important; on account of the immediate danger to life, and the great probability of the development of morbid structural changes in the uterus, its appendages and the adjacent tissues, which cannot be relieved except by the most judicious and scientific management; and not then unless timely application be made to the physician. Sudden suppression is not necessarily what may be termed acute. There are many cases of sudden suppression of the catamenia, that present no very imminent symptoms; and though the patient makes no great complaint at the time, danger is ahead, unless proper treatment be instituted. The particular class to which we invite your attention is that in which the symptoms are so urgent and threatening as to imperatively require prompt and decisive measures for relief. We must act without hesitation, as soon as the surroundings have been surveyed, and we have gained a clear and intelligent understanding of the case. I was called to see Miss ——, an unmarried female of respectability, some

years ago, aged eighteen years, of florid complexion, blue eyes, and chesnut hair, inclined to plethora, weighing about one hundred and twenty pounds. She had been menstruating healthily for three years, and no difficulty had occured until this time, when the flux failed to make its appearance from a violent impression of cold. She was now suffering intensely with pains in her head, back and hypogastrium. The pains were paroxysmal, alternating between the points mentioned. The head was most complained of, especially over the crown, ranging back to the base of the cerebellum. The conjunctivæ were injected, the surface hot, and the pulse full, hard and bounding. She was becoming delirious. I bled her freely, from the arm, ordered hot fomentations to the abdomen, and endorsed the treatment by the exhibition of small doses of tartar emetic, in order to restrain the reaction, which was prompt, within the proper limits. The medicine was not carried to the point of emesis, although repeated every hour or two until the circulation was equalized and sufficient diaphoresis produced and sustained. The patient became tranquil very soon, and the catamenia appeared in about twelve hours without pain. She made a good recovery, and was as regular afterwards as she had always been. I have treated many cases of this class, in this way, with universal success. Where general blood letting is contra-indicated on account of inherent or acquired constitutional weakness, I resort to cups and leeches, and sometimes blisters. Cups to the sacrum, and three or four leeches a little above each groin, or two or three to the os tincæ, will materially add to the effects of the remedies usually employed. I once had the most satisfactory result from the application of a blister over the hypogastrium, after having bled the patient and given a little calomel. Acute suppression must be treated by antiphlogistic

means, promptly and energetically used. I insist that it will not do to temporize. If we do, and luckily escape the loss of life, we may solace ourselves as quite happy, if a life of misery is not entailed upon the victim. Chronic metritis, metro-peritonitis and ovaritis one or all, will be the almost inevitable result of such a course. The subject we confess, is old, and our treatment is old, but has been ever crowned with the most fortunate victories won on the battle field of medical science.

MEMBRANOUS DYSMENORRHŒA,

dependent on the condition of the mucous lining of the uterus in cases plethoric and in cases anæmic.

Dysmenorrhœa is not a disease. It is only a symptom or group of symptoms, expressing malposition of the uterus: inflammation of its tissues, constriction of the cervical canal or os tincæ, congenital or acquired; flexions, congestions, perverted innervation, ovarian disorders, organic or functional, etc., etc. It is not our purpose to present an elaborate paper on this subject, but only to speak of some of the forms of the malady commonly met with in this country, mostly dependent on corporeal endometritis. There is a variety found in persons of the tubercular diathesis, or who are syphilitic, in which the symptoms bear a certain and constant relation to the constitutional vice. In these, the condition of the mucous and glandular structures in general will indicate the peculiar character of the pathological local affection. Some time ago I had a patient that exhibited a singular or, at least, a very uncommon symptom. She was of the tubercular diathesis, nervous temperament, aged twenty-one years; married at seventeen, was the mother of a child at nineteen, and never conceived any more; suffered from membranous dysmenorrhœa for seven or eight years; ceased menstruating two years before her

death, which was caused by pulmonary tuberculosis. At the onset of the period, she was frantic with pain until the flow came on, which usually happened in from six to twelve hours. There was then no further trouble until eight or ten days after the suspension of the discharge, when powerful pains would supervene and effect the expulsion of a drab or ash-colored membranous clot. Sometimes the clot was very firm and spheroidal. There was not the least hemorrhage attending or succeeding this act. I attended another tuberculous lady—single, never married, aged twenty-five years—who presented the singular feature of expelling a membrane or clot within two or three days from the beginning of the flow, and another, more consistent, a day or two after its cessation without further hemorrhage. I am of the opinion that in these cases the mucous membrane of the uterus undergoes peculiar changes, modifying the natural process of disintegration and exfoliation, which occurs at each catamenial return.

We now pass on to consider those cases of membranous dysmenorrhœa usually called congestive and inflammatory. They are also called anæmic and plethoric. This is altogether a different class, and, as may be seen, presents two well marked sets of cases. No constitutional taint belongs to either; both throw off shreds, fibrinous clots, membranes and, sometimes, uterine casts during the monthly periods. We believe that both are strictly dependent on inflammation of the mucous and glandular tissues of the uterus, and differ from each other mainly in the intensity of the inflammation, its chronicity and also the modifications caused by age, temperament and the exercise of sexual emotions and practices. Whilst there may be passive congestion in the former, it does not argue that there is not chronic endometritis.

I have invariably found positive evidence of its existence in the cases diagnosed by the use of the uterine sound; and have furthermore proven the correctness of the opinion by the strong test of treatment based upon this conclusion. Indeed, I am sure that many of the most obstinate cases are complicated by an extension of the inflammatory process, to the other uterine structures and adjacent tissues and organs, so that we may have metritis, salpingitis, ovaritis, and pelvic peritonitis or cellulitis, in the same individual. The inflammatory action is sub-acute, and though the patient is a constant sufferer, the symptoms are intensified about the time of the menstrual periods and during their continuance. The mammæ became swollen and tender, the acme of nervous excitability is reached, hysterical phenomena frequently appear, and the climax is found in the most intolerable paroxysms of pain, following each other in rapid succession, until relief is secured in the expulsion of a fibrinous clot or membrane, one or both. This is often attended by considerable hemorrhage, thus affording some immunity against the development of a higher grade of inflammation. The patient is despondent, weak, and nervous; complains of her back, hips and lower extremities and of pain over the crown of the head. She ordinarily has leucorrhœa during the interim of the menstrual periods. If married, she is either sterile or aborts in the early months of pregnancy. Her life is one of perfect misery. She has perhaps applied to the family physician who prescribed aloetic and ferruginous emmenagogues, greatly to her injury. The speculum has probably been introduced twice a week, for months, and cauterants and tents used only to aggravate the symptoms. She had better now consult another physician, but modesty forbids. She has submitted to one, for examination, and though he was absolutely ig-

norant of the nature of the case and therefore of the indications for treatment, he had unfortunately failed to mention the facts. (Allow me here, by way of parenthesis, to state that many incompetent and bad men, the pretenders, make it a point to examine every woman who will permit it, merely for the sake of retaining their practice.) The patient at last, worn out by disease and disappointment, either becomes a victim to the opium habit, or resorts to the use of some boasted uterine catholicon or regulator, so called, only to meet with further disappointment and injury. She suffers on while life is slowly but surely ebbing away. Perhaps, by this time the anxiety of friends will beget a rational thought. They will now determine to consult some really eminent gynæcologist; a physician skilled in this particular department of medical science, one who believes that the uterus and its appendages are a part of the general system, having vascular nervous and vital relations and connections with the balance of the economy—and not a mere separate entity to be cut, cauterized, injected and plugged without any reference as to what is to be effected by either. The real gynæcologist will pursue the most rational and truly scientific course in this, as in other classes of this disease. He will use such constitutional treatment as the pathology dictates, and he will also direct the local treatment on the same principle. He will be compelled to use the speculum and probe, but he will use them in the interest of the patient. I believe that in this class of cases we may confidently expect to find sub-acute inflammation of the mucous and glandular structures of the uterus, and, as before mentioned, often more. The nutrition of the tissues and organs involved is in proportion to the activity of the inflammation—and, therefore, the difference in the degree of

structural changes that occur in different cases and in the same case at different times.

We have been in the habit of treating these cases by the use of the protiodide of mercury, in one-third grain doses three times a day during the intervals of the catamenia, until some impression is made by the mercury as evidenced by the gums. Any mercurial will answer if cautiously given, but I have been more fortunate with the protiodide, and usually administer, in connection with it, quinia and the extract of nux vomica or strychnia in minute doses. The patient is also directed to take a vaginal douche of water, as warm as will be pleasant, daily, with a common rubber-pump syringe, and to continue the application as directed by Dr. T. Gailiard Thomas in his most excellent work on the diseases of women, when speaking of the treatment of endo-cervicitis. This will greatly relieve the morbid irritability of the uterus and prepare it for less soothing but more efficient remedies. I try to avoid all treatment that tends to unduly excite the organ. The carbolized cloth tent, introduced and retained only three or four hours at first once or twice a week, seems to act better than anything else. The organ becomes less irritable after using it a few times. I am sure that the cloth tents are superior to all others in these cases. When the cervix and os internum have been first prepared by the use of the tents, the introduction of a few drops of the tincture of iodine is often very servicable, and materially assists in the cure. The nitrate of silver and the tincture of the chloride of iron have been much lauded in the cure of endometritis, but have not been very efficient in my hands. The strictest hygienic regulations must also be observed, and total abstinence from sexual excitement. In connection with the general management of the case, the frequent application of

a weak current of galvanic electricity will often greatly benefit the patient.

We now pass on to speak of what is termed plethoric or inflammatory dysmenorrhœa. I have already stated my opinion as to the identity of this with the former so far as relates to the structures involved in the pathological conditions present in the two. As this occurs in the plethoric, we can readily understand why the inflammation is more active and all the symptoms more acute—why there should be a periodical excitement of the sthenic kind and why fibrinous clots and membranes should be formed in the uterus to be expelled. In this form we have more exalted excitement, but after months of distressingly painful returns the constitution may become so impaired and the local inflammation so altered as to bring about all the symptoms and pathological characteristics of the so-called congestive form just described.

This does not happen so often, as at first sight it would appear, that it should do. The sanguine temperament generally predominates in these subjects, and ready reaction takes place after each of the attacks. The process of digestion and sanguification goes on almost uninterruptedly in many instances, and thus the case will remain *statu quo* for a long time. A severe throbbing headache, flushed cheeks, and a sense of fullness in the hypogastrium, declare the approach of the period. The storm gathers, and the vessel of life is rocked and tossed by the swelling billows of torturing agony, until the evil genius is expelled. The shock soon subsides, but will fall again with like fury about the twenty-eighth day. And so it will be to the end of the chapter, unless resort is had to a safe harbor in the keeping of an intelligent and competent physician. In these cases, there is, endometritis, varying in intensity according to the

nature of the exciting cause, the condition of the individual at the time of its action, the duration of the morbid phenomena, the emotions and habits of the patient, and also the treatment to which she has been subjected. Now, here is a fine field for the practice of the noble art; no place for quacks and empirics; no room for emmenagogues and specifics. Nothing will save us unless we thoroughly comprehend the case. In this, as well as in every variety of dysmenorrhœa, we have to institute treatment for the temporary relief of the trouble, at the time of the menstrual molimen; but the important consideration is to attempt the cure of the patient by addressing our attention to the indications, as as they appear on the chart of morbid anatomy. There is much danger in the use of anodyne and narcotic drugs, to soothe the anguish of the patient at or during the period of attempted menstruation, unless proper caution be observed. More benefit will be done by nauseating portions of tartarized antimony, hot fomentations, pediluvia, coxæluvia, and cups to the sacrum; or, it may be necessary to premise the treatment by moderate venesection. In some, we are compelled to administer an anodyne—this is, however, rather an exceptional case. Our great duty is to treat the patient in the interim, and break up the morbid conditions present in the case. The hygiene must be improved, an abstemious course observed; low diet; moderate and cheerful engagements; occasional venesection cautiously practiced; alterative doses of calomel, etc.; the warm vaginal douches daily; frequent hip baths, and leeches to the cervical portion of the uterus, and blisters over the sacrum, or hypogastrium varied to meet the indications—constitute the plan of the writer.

DYSPAREUNIA.

Dyspareunia as defined by Dr. Robert Barnes, of London,

signifies "the condition of difficult or painful performance of the sexual function." In the female there are many circumstances capable of inducing this exceedingly unhappy state of affairs. It is not our intention to refer to them all, but merely to present a case in order to bring before you the importance of the subject. As disagreeable as the theme may appear, it involves a vital interest, and we cannot escape its contemplation with justice to humanity, or credit to ourselves. The marriage institution was ordained by the Creator for the propagation of the species; and everything that tends to hinder the fulfillment of the Divine will, should command the serious attention of all men, professional and non-professional. It is the great duty of our profession to guard the health, and therefore the happiness of the community. It is ours to follow in the footsteps of the great Master, to heal the sick, cure the halt and the lame, and restore to the blind their sight. But if there is one thing that should move to pity more than another, it is an unfortunate woman who cannot receive the embraces of her husband without torture—and yet there are many who cannot. There is scarcely a disease of the female generative organs but that tends to disqualify the individual from participation in the performance of the sexual act except with pain. Indeed, in many instances, the condition of these organs is such, that there is not only pain, but actual danger connected with the copulative act. These facts should, when they come to our knowledge, be thoroughly investigated and the cause brought to light. I am sure that many women have been very badly treated by husbands who only considered the gratification of brute passions. I was once called to see a lady who had been married seven or eight days and was violently sick, from no other cause than the inordinate attacks of her husband, who was an old libertine. She had

metro-peritonitis, and came near losing her life. Cases like this are common among certain classes of society, though ordinarily of different degree. I am confident that many good women are wrecked in this way, and sent to a premature grave. But there are cases where the trouble arises from causes difficult to appreciate. A little more than two years ago I accouched a very nice lady, and upon making the usual digital examination in the first stage of labor, the patient made terrible complaint, and it was with considerable difficulty that I performed the duty. The vagina contracted closely around the finger, and chloroform had to be given, before I could succeed in reaching the os tincæ. She was delivered after a tedious and severe labor, (for she could not bear the anæsthetic well,) of a very fine male child. Before I left she informed me that she not only had not experienced the least pleasure in intercourse with her husband, but the act had ever been so painful that it had been seldom performed, and not at all, for the past six months. She had always been healthy, and had not suffered from any irregularities; had no hemorrhoids, no trouble about the urethra; and had conceived soon after her marriage, which was about a year before. Her convalescence was prompt. I informed her that she would not be so unfortunate in the future, but the facts proved to the contrary, for I delivered her a few months ago again, and was informed that the difficulty had not abated. The case has not been under my treatment, as I have only been called to act as accoucheur. I am sure however, that it is a case of morbid irritability of the nerves supplying the vagina, and is only a case of vaginismus. I think that all is right with her now, as her husband has not consulted me as he said he would do if the difficulty should remain. I have introduced this subject because it is evident that too little attention has been paid to

it in this country. I believe that it will throw light on the pathology of many female disorders, and will open a new road that will lead the practitioner into a clearer and more definite understanding in regard to many female affections often shrouded in mystery.

A CASE OF ANTEFLEXION OF THE UTERUS,

With general hyperæsthesia of the peripheral nerves, hysterical convulsions, etc., treated by the use of galvanic electricty, conception occurring after two months' treatment:

Mrs. ——, about twenty-four years of age, the mother of two children—the younger aged five years—had been mostly confined to her bed since her last delivery; had been treated by several physicians, without any real improvement; was examined by speculum, and the os tincæ and cervix cauterized in a few weeks after delivery, etc. I was called to see her, and found her prostrate; very nervous, and full of apprehension about her condition. She said that, after five years' suffering, she had about given up. She was well acquainted with cauterants, medicated cloth, and sponge tents, and was familiar with the action of opium and its preparations, the bromides, hydrate of chloral, chloroform, etc., to say nothing of weaker but safer sedatives—valerian and assafœtida. Her nervous system was almost a complete wreck. She had hysterical convulsions at the catamenial periods, and frequently in their intervals. There was a general hyperæthesia of the peripheral nerves, especially over the left half of the person; the hand placed any where upon the left scapula, or over the cardiac region, would excite a convulsion; the same would happen from pressure in the left iliac region. An examination revealed an ante-flexion of the uterus. The angle was acute, and the

anterior wall of the cervix much attenuated, and the parts generally were tender to the touch. My friend, Prof. W. F. Westmoreland, saw her, with me, soon afterwards, and verified the diagnosis. In a few weeks, she was brought to the city for treatment, as she lived too far off for me to be able to give her the necessary attention at her home. She was at once denied the use of all narcotics; a little brandy was given daily, and she was placed on a very nutritious diet. No medicine was prescribed except a mild tonic—five grains of the subcarbonate of iron in one drachm of the compound tincture of cinchona, three times a day. A gentle current of galvanic electricity was applied every day or two. At first the electrode connected with the negative pole of the battery was placed over the cervical and dorsal vertebræ and the operater would hold the other and complete the circuit by placing his other hand (moistened) over the most sensitive parts. The patient would then hold the sponge in her hand and the current would be passed to the feet. This was done on either side, and the operation lasted about half an hour. The electricity was applied also over the sacrum and hypogastrium. In a week's time she suffered no inconvenience from the use of the current in the usual way of its application. The period came and a little hysteria cropped out, but was easily subdued by the hypodermic administration of one-sixth of a grain of morphine. This was the end of the fourth week. She was now able to walk over the house, and she sat up most of the time. She continued to improve steadily, and in due time menstruated without pain, although she became somewhat nervous. I neglected to state that the galvanic current was frequently directly applied to the os tincæ and cervix uteri per vaginam. After two months' sojourn in our midst, and imme-

diately after the last catamenial return, she left for home, distant eight or ten miles, sitting up by the driver in an open top buggy, and made the trip without any untoward event. When she came to West Point she was brought on a bed in a wagon. I must confess that I was a little surprised in a few weeks when I was informed that she thought herself pregnant. I saw her husband a short time ago, and he said there could now be no doubt of the fact, and that she would surely be down in a few weeks. In this case the nutrition of the system was much improved in general. I do not believe that galvanic electricity merely increases the nerve force by excitation or acts by correlation, but that it also acts as a sort of nerve food, making physiological impressions upon the molecular nerve structures and thereby improving their nutritive condition. I am much in the habit of using it in the management of old, broken down cases of every kind, and could not be induced to give it up as a remedy.

TORSION OF THE UTERUS.

Torsion of the uterus is a very uncommon displacement of the organ. I have never seen but one case and that was in the person of a negress, a few weeks ago, aged thirty-five years, of low stature, stoutly built; a washerwoman; never was pregnant knowingly; and under good character. She had been confined to her bed for several days, had no fever, but was complaining of pain and soreness in left iliac region, and back, over the lumber vertebræ and sacrum. She informed me that a few days before, she had hurt herself by lifting a large tub of wet clothes from the ground, and, placing it upon her head, and was obliged to take her bed almost immediately, where she had been ever since. Being satisfied from the symptoms, that there was some uterine displacement, a digital examination per vaginam was made,

and I was surprised that the organ was near its usual elevation, but more so, to find the os tincæ at right angles to its normal position. Upon a minute exploration, I was satisfied that the uterus was twisted around its longitudinal axis to the extent of the one-fourth of a circle. This opinion was verified by the introduction of the speculum. I undertook to restore the displaced organ, by elevating it as much as could safely be done, and then suddenly withdrawing the support. But only a slight elevation could be effected even by the employment of the speculum, which was a cylindrical instrument. The patient was now placed in the "genu-pectoral" position, and the speculum used as a pneumatic repositor, according to the method of Prof. Henry F. Campbell, of Augusta, and the mal-position was corrected in an instant.

OCCLUSION OF THE VULVA.

The child of Mrs. —— was brought by its mother to me three years ago, on account of congenital occlusion of the vulva. It was fifteen or eighteen months old, and otherwise a proper child. The vulva was completely closed from the meatus urinarius, posteriourly to the full extent. An incision was carefully made in the direction of the raphe, and the ostium vaginæ well exposed. The parts were dried of blood and the edges of the wound separated by the introduction of a piece of oiled linen. The wound was dressed twice daily, in this way, and cicatrization took place in a short time, (two or three weeks).

OCCLUSION OF THE VAGINA, WITH RETROVERSION OF THE UTERUS.

Last summer I was called to see a young unmarried lady, aged twenty-four years, a blonde, who had been sick for two or three years. She bore evident signs of much suffering. The catamenia had ever been scanty from the time of their first appearance, when she was about sixteen years old.

She had undergone many hardships from poverty, and was now a confirmed invalid. She complained greatly of her left side; micturition was frequent and painful; and constipation was the rule. She bent forward in standing and and walking, and kept her hand pressed over the left iliac fossa. She was frequently chilly and had but little appetite. Her mother informed me that there was some malformation of the genitals. An examination revealed an almost complete closure of the vagina, by a thick, elastic and highly vascular membrane, the hymen, in which there was an opening, near the meatus urinarius, that would scarcely permit the intromission of a common sized silver probe. A very small director was introduced through the opening, and an incision made antero-posteriorly, to within a few lines of the wall of the vagina. The hemorrhage was considerable, but was arrested by the application of cold water. On the next day, a rubber bag, moderately filled with lamb's wool, was introduced, to prevent any attempt at reunion, and allowed to remain several hours. This, the patient learned to do, and it was kept up daily for ten days, at which time the catamenia appeared. She did not suffer so much this time, as usual, but had some pain, and the discharge was insufficient, and lasted, as heretofore, only two days. Upon a more minute examination, she was found to labor under retroversion of the uterus. The "genu-pectoral" position was resorted to, and air admitted into the vagina, and the displaced organ returned quickly to its normal situation. The patient was taught to perform this operation, and advised to employ it nightly, until relieved. She improved greatly after this, and does not now resemble the delicate invalid of last summer. The menstrual function is not perfectly performed yet, but she does

not suffer as before, and is cheerful and able to give material assistance in the domestic affairs of the family.

RUPTURE OF THE PERINEUM.

A lady, the wife of a practitioner visited me last summer for consultation in regard to her health, which had been very bad since the birth of her first and only child, five months old. She is a blond of small stature, aged about twenty-six years. She was thought to suffer from some occult uterine disease consequent upon child bearing. In talking with her, I asked whether she had perfect control of the bowels. She did not think herself perfect in this respect. I then inquired whether the evacuations were inclined to come too far forward when at stool—she replied in the affirmative. She could not stand or walk without dragging weight in the pelvis. An examination proved that the perineum was ruptured, involving the external fibres of the sphincter ani muscle. Two or three weeks afterwards I performed an operation for her relief. The old cicatrix was dissected off to its full depth, by a pair of curved scissors, and the parts drawn together by silver wire in the usual way—and fastened by perforated shot. The wound healed by first intention, and the wires were not removed until the expiration of a month. They had done no harm that I observed, except that the shot had produced some excoriation. They ought to have been removed as soon as union took place, but she would allow no one except myself to do so, and finally came in a carriage to me for the purpose. The next case was that of a lady, aged twenty-two years—the mother of two children, one four and the other one year old. She was a brunette of medium size, and inclined to be fleshy; very intelligent and refined. At the birth of her first child she suffered a complete rupture of the perineum, destroying the recto-vaginal septum for

some distance, and rendering control over the bowels almost impossible. Her condition was truly pitiable. This case presented a new difficulty. There was danger of either closing the vagina too much, or of obstructing the anal extremity of the rectum; as from want of resistance, the vulva was drawn back towards the coccyx. The bowel was thin and yielding, and had no support from the vaginal wall. With a pair of good forceps I lifted the tissue to be removed, and carefully trimmed it away, closely observing the triangular space. The scissors and knife were both employed. Considerable hemorrhage occurred, but was arrested by cold and compression. A moderately curved needle of suitable length was armed with silver wire, and introduced an inch from the edge of the rent on the left side, and carried to the bottom, so as to embrace the vaginal portion of the septum, and brought out to correspond on the opposite side; the index finger of the left hand being in the bowel as a guide. The others were now introduced, the distance between them being about three-eighths of an inch. The wires were now secured by passing both ends through the perforated shot, which were fastened by a pair of pliers. If the wire nearest the rectum had been tightened and shotted without first introducing a tube into the bowel, leaving a small portion external, for the wires to rest on anteriorly, the anus would have been closed by the loop. The tube prevented this difficulty. Twenty-four hours after the operation, secondary hemorrhage took place, but was relieved by the use of cold water. The wires were removed in a fortnight, and the wound was found to be healed, perfect union having occurred except the integument. In both of these cases the bowels were thoroughly evacuated before the operation, and locked up afterward and kept so for a fortnight, and then opened by enema.

PSORIASIS, NON-SYPHILITICA, POPULARLY KNOWN IN A VARIETY OF FORMS AS TETTER.

BY S. H STOUT, M.D., ROSWELL.

Willan describes psoriasis as "a disease of the skin characterized by a rough and scaly state of the cuticle, sometimes continuous, sometimes in separate patches of various sizes, but of an irregular figure, and, for the most part, accompanied with rhagades or fissures in the skin." He enumerates eight varieties, viz: guttata, diffusa, gyrata, palmaris, labialis, scrotalis, infantilis and inveterata, all modified expressions of the supposed same disease, varying with the location upon the surface of the body, the duration of the lesion, the age of the patient and the degree of virulence of the abnormity.

Neither the nomenclature of this disease, nor its definition, as quoted above, gives the slightest inkling of its pathology. The name is indicative of the sensation of itching, which is often, not always, felt at the seat or in the vicinity of the lesions upon the skin, which the definition describes.

After much reflection and investigation, twenty years ago, the conviction was forced upon me by facts and experience in the treatment of numerous cases of "tetter" of every variety, that the pathology of psoriasis has not received at the hands of the profession the attention it deserves—that it is little understood, and has thus become to be regarded as one

of the *approbria medicorum.* This consideration stimulated me to give it careful attention. After having arrived at a conclusion as to the pathology of the disease, the treatment indicated thereby has been so uniformly successful, that I am impelled to prepare this paper, confident that, if others competent to prescribe, will give the principles herein suggested a fair test, they will no longer pass by a case of so-called tetter with indifference, nor shrink from treating it, as is now done by a majority of practitioners of medicine.

In psoriasis, whether it be syphilitic or non-syphilitic, careful observation proves that there occurs upon the skin and in deeper seated parts, an exudation of vitiated or abnormal lymph, which when dried, if upon the skin, gives rise to the characteristic scaly appearance, and if deposited in the mucus membrane of the mouth and throat, presents the appearances so familiar to all acquainted with the symptoms and phenomena of syphilitic affection in those localities. The exudate is abnormal, and incapable of development into healthy tissue. Wherever it is present, it interrupts the function of the part, and the presence of each drop of it seems to provoke its deposition in continuity. In general, the exudate is first observed upon the skin, and especially upon the skin of those parts most sensitive and exposed to the exciting causes of irritation, as upon washerwomen's hands, the hands of laborers exposed to wet and cold, the scalps of infants and young children, the labia and the scrotum.

The differential diagnosis of psoriasis syphilitica and non-syphilitica is often difficult, and, in some cases, impossible—the truthfulness of the individual, and the credibility of his or her family history, affording the only proof upon which to base a verdict. I am satisfied, from careful observation, and after treating numerous cases of psoriasis, that

the vice of nutrition, or of the assimilative function, is essentially the same in the syphilitic and non-syphilitic varieties, and that the exudate is essentially the same in both forms of the disease.

As to the etiology, I must say that I believe it is beyond doubt, that both forms are often developed under the influence of heredity. In psoriasis syphilitica, a specific virus is the exciting cause. In the non-syphilitic variety, hard living, inferior diet, impure air and irregular over-taxing of the digestive powers, singly or combined, are often the exciting causes of the disease. The precise state of the assimilative function that forms the exudation of vitiated fibrin in psoriasis, we no more understand than we do that which provokes the deposit of tubercular matter in the lungs, lymphatics, brain, etc. This we do know: the exudate in psoriasis is fruitful of mischief wherever deposited. It disturbs the functions of the part, and is more or less dangerous to life, and more or less discomforting according as the organ into or upon which it is exuded, is important to life or comfort, and sensitive to irritation or prone to inflammatory action.

Psoriasis non-syphilitica is a very frequent disease. It is too generally regarded by the average practitioner as *a local disease.* The populace generally so regard it, and patients afflicted with it are too often content to rely upon anti-tetter nostrums zealously thrust upon their attention by interested parties, or by over zealous and, perhaps, well meaning men and women, whose vanity is gratified by the trial of remedies they recommend, although their ignorance of the nature of the disease, and the dangers attending it, is as profound as that of a nude Hottentot of the blessings of civilization. The very name of the disease, and the definition given of it by nosologists, are calculated to mislead the superficial stu-

dent. The numerous varieties described in books of reference, contribute little to the fund of information which he must acquire before attaining skill in the diagnosis and treatment of the disease, and the protean forms in which it may disturb the functions of the human organism, for the non-syphilitic fibrinous exudate seen in this disease may provoke the same pathological phenomena and lesions that are recognized as caused by fibrinous exudates excited by the virus of syphilis. All who aspire to occupy the relationship of family physician (the highest dignity known to the medical profession) should awake to this truth, and act upon it.

Fibrinous exudations in or upon the skin, taking place under the influence of the syphilitic virus, in their appearances and consequences, in very many cases, exactly resemble those which occur in psoriasis non-syphilitica. My practice in psoriasis non-syphilitica, has been almost wholly directed by the hypothesis, that, whenever the exudate provoking the phenomena of psoriasis manifests itself upon or in any part of the skin, however slight it may be, there is a vice of the nutritive function, which demands to be promptly combatted by constitutional treatment, and every manifestation of diseased action that may become consequent upon the deposit of the exudate in parts deeper seated, as promptly met, as it would be were the exudate known to be excited by syphilization. Since the adoption of the above views of the pathology of psoriasis non-syphilitica, with due care to modify the treatment in accordance with the peculiarities of each case, I have had as much success in controlling the disease, in all the forms presented to me, as in the treatment of constitutional syphilis.

In psoriasis non-syphilitica, as well as in psoriasis syphilitica, I have met with patients so broken down, as to require

building up by tonics and nutritious diet, pure air, etc., before they could bear the anti-plastic and defibrinizing remedies necessary to relief. The deposit of the exudate in non-syphilitic psoriasis, as well as in the syphilitic variety, may take place in or upon organs deeper seated than the skin, producing, if in or upon the nerves, neuralgia; if in the nerve centres, paralysis in its varied forms of expression, and convulsions of the epileptic variety; if in the muscles and tendons, rheumatic pains; if in the mucous membranes, catarrhal affections, dyspepsia, etc.; and if in the periosteum, nodes.

If I am correct, the phenomena of non-syphilitic psoriasis, whenever manifested in ever so slight a degree, should never be lightly regarded by the practitioner. Patients thus afflicted, should be warned of the dangers which the abnormal exudate forebodes, urged to resort to constitutional treatment, and to submit to the watchful care of the medical adviser, who ought to promptly prescribe the remedies necessary to remove the exudate, and to prevent its further deposit. As in constitutional syphilis, we see diseased manifestations, at first only "skin deep," and if proper treatment is neglected, the depth of the locality of those manifestations gradually increases; so, in psoriasis non-syphilitica, we may often see evidences of the effects of vicious nutrition manifesting themselves, from the skin, step by step, to the deeper seated tissues.

It may be well before entering upon the treatment to recapitulate my views of the pathology of psoriasis, so-called.

(*a*) Psoriasis, both the syphilitic and non-syphilitic varieties, is a lesion in or upon the skin, consequent upon the exudation of vitiated or abnormal lymph from the capillaries of the part. It is probable the lymph thus exuded consists, for the most part, of abnormal fibrin incapable of

development into healthy tissue and tending to rapid desiccation—hence the phenomena of scaliness and the rhagades.

(*b*) That the "cacinosis," (flow of vicious fibrin,) has its origin in an abnormity of the nutritive or assimilative function, scarcely admits of a doubt, whether the exciting cause of it be the syphilitic virus, or any one or more of the numerous causes, that depress the vital energies and disturb the function of nutrition.

(*c*) Heredity as certainly asserts itself in the non-syphilitic variety of the disease as it does in the syphilitic variety.

(*d*) The syphilitic virus as an exciting cause of the disease under consideration, is more potent and rapid in its action, than those causes which excite the non-syphilitic variety of it. Hence, syphilitic psoriasis, is often vigorously met by remedies, before serious and even fatal mischief has been done. The enfeebled patient, living perhaps amid circumstances daily depressing his vital energies, often neglects (and his physician too often neglects his duty in the premises) to seek advice in regard to a spot of psoriasis, non-syphilitica which intrudes upon his attention, warning him that his function of nutrition has become abnormal.

(*e*) Psoriasis non-syphilitica as well as psoriasis syphilitica indicates a condition of the nutritive function that may in certain conditions of subjects be transmitted from one person to another by intentional or accidental inoculation of the exudate.

(*f*) Psoriasis syphilitica, when early and vigorously attacked by anti-syphilitic remedies, is generally easily conquered. Patients in syphilitic cases generally promptly apply for advice, and before the vital energies are seriously impaired. Not so generally those who suffer from the non-syphilitic variety of the disease. Few such apply to well

informed physicians for advice. They are content with empirical remedies. Many of them are too poor to incur the expense of regular treatment, and their poverty compels them to remain exposed to the exciting and aggravating causes of the disease until their recuperative energies are exhausted, or neuralgia, paralysis, epilepsy, rheumatism or dyspepsia, consequent upon the exudate, compels them to cease from their unhealthy occupations.

(*g*) Syphilitic psoriasis and its consequences generally sooner yield to treatment, than does the non-syphilitic variety, nor does the practice upon cases of the former, in the present state of syphilography demand such discriminating observation of facts to arrive at a minute diagnosis as the practice upon many cases of psoriasis non-syphilitica.

The treatment I have adopted, is based upon the following indications: First, remove if possible, all exciting causes and aggravating influences. Secondly, soften the desiccated fibrin as a necessary precedent to the getting rid of it, either by absorption or separation, if upon the surface of the skin; and thirdly, give tone to the capillaries, so that they may be enabled to remove the abnormal exudate, and perform their normal functions.

These indications kept in mind, each case in all its aspects must be carefully studied, in order that the first mentioned indications may be met. In psoriasis syphilitica, the exciting cause being a specific virus, the antidote of that virus, mercury, in some of its forms, is generally promptly administered. In psoriasis non-syphilitica the exciting causes are not so easily controlled, because the patient ignorant or indifferent to the dangers that he is threatened with, too obstinately refuses to avoid them on account of a local inconvenience which he speaks of as "nothing but a tetter." When neuralgia, paralysis, indigestion or rheumatism plagues

him, he and his medical attendant are, too often for suffering humanity, innocent of a suspicion that his sufferings are in any way provoked by a vice of the function of nutrition which gave him warning in the form of a patch of psoriasis.

When the patient's general condition does not forbid, to meet the second and third indications, I am in the habit of administering, under the same rules as in psoriasis syphilitica the following:

℞. Hydrargyri bi-chloridi.....grs. iiss.
Potassii iodidi.....ʒi.
Aquæ .....f℥viii.
Solve.

S. A teaspoonful three times a day.

Here we have in reality as the result of chemical action the biniodide of mercury dissolved in a solution of iodide of potassium. I sometimes greatly increase the quantity of iodide of potassium in the above, when needed. It is best generally to administer the medicine in a wine-glassful of the cold infusion of wild cherry bark, or a teaspoonful of tincture of gentian. As in constitutional syphilis, when atony of the digestive organs is manifest, I prescribe with the view of correcting it before pushing the mercurial. Whenever the patient's system tolerates the mercury well, as soon as the patches of psoriasis indicate improvement, the mercury is withheld, the iodide of potassium pushed to iodism, and the iodism kept up until the exudate disappears.

Sometimes, in psoriasis non-syphilitica, the patient does not tolerate the mercury. In such cases, arsenite of potash, given in combination with iodide of potassium, often secures favorable results. The following is a favorite formula:

R. Potassæ arsenitis.....f ʒi.
Potassii iodidi ..... ʒiii.
Aquæ .....f℥viii.
Solve.

S. A teaspoonful three times a day, in a wine-glassful of the cold infusion of wild cherry bark, or a teaspoonful of the tincture of gentian in half a cupful of water.

Due regard must be had to the condition of all parts of the organism during the treatment of each case, and such additional treatment prescribed as may be indicated, bearing in mind, that the mercurials and iodide of potassium are efficient just in proportion to the approximation of the state of the digestive organs to the normal standards. Hence, psoriasis in young children is easier controlled than in the aged, and in recent cases than in those of long standing. In the latter class of cases, it has often happened in my practice, that improvement is so slow as to be almost imperceptible under six weeks. In some cases, it has taken six to nine months persistent treatment to effect a cure.

The local treatment only becomes important in view of the inconvenience or discomfort of the patient. To relieve the often intolerable pruritus and burning, and to protect the parts from the drying effect of the atmosphere, I find the following formula very efficient:

R—Sulphuris (lot.)..... ʒiv.
Acid. carbolic. (crystals)..... grs.xx to xl.
Camphor (gummi) ..... ʒi to ii.
Cerati simplicis..... ℥j.

Rub the gum camphor with the carbolic acid, then incorporate the ingredients with the simple cerate *sec. art.* S. Anoint the patches with the cerate twice a day, and protect them with gloves, if on the hands.

It was my intention to have added to this paper minute

reports of some remarkable cases that have occurred in my practice; but the present length of it forbids more than a brief allusion to some of them.

I have met with a family of four young ladies affected with tetter, all of whom suffered from indigestion, and various nervous disturbances, who were relieved by administering anti-tetter remedies. Two of these ladies had evidences of the exudate upon the lips, and the mucous membrane of the mouth and throat.

In one case, a very aged man, who, for many years, had been subject to fits of nervous prostration, after I discovered evidences of an exudate just beneath the mucous membrane of the mouth and fauces, was relieved, and, for three years, has been rendered comparatively comfortable by the administration, whenever the exudate showed itself, of the bi-niodide of mercury and iodide of potassium. This patient recollects that he has had patches of psoriasis on one of his lower extremities several times, in years past. There is no reason in his case to suspect syphilitic taint. On the contrary, the moral evidence is conclusive of the non-syphilitic character of the affection. He is a man of intelligence, and not disposed to conceal any moral weakness.

In a large family connection, I have counted as many as thirteen cases of tetter. One of this number has had epileptic convulsions, and was relieved by iodide of potash alone.

In the case of a patient more than fifty years of age, the only expression of the disease under consideration, was a deposit in and under the skin of the lower eyelid, which cracked open, would often bleed and scab over. Its persistence, irritable condition, and indisposition to yield to local remedies, won for it a wide-spread reputation as a cancer. It was pronounced a cancer by every physician who examined it, but myself. The cancer quacks in all the

country round, were making overtures to this patient when he fell into my hands. I put him upon the bi-niode of mercury and iodide of potassium. No impression was visibly made until the lapse of six weeks. From this time forward, there was a steady, but slow, improvement, while the patient was alternately using the bi-niodide of mercury and the iodide of potassium. At the end of eight months, the so-called cancer had entirely disappeared. This patient's digestion was good. He labored on the farm, making a full hand, while under treatment—the only caution given him, was to avoid vicissitudes of temperature, and dampness of atmosphere, to live, eat, and sleep, regularly. This man never had syphilis, nor did his parents. This case is illustrative of the imprudence of coming to a hasty conclusion in regard to suspicious tumors and ulcers, and of the value of principles as a guide, in the practice of medicine. It confirms me in the opinion I have long entertained, that many of the so-called epithelial cancers are aggravated local expressions of the disease under discussion, which, if promptly treated as above recommended, could be cured.

In another case, believed to be non-syphilitic, the patient, previous to my acquaintance with him, had suffered for a a period of more than a month, with agonizing sciatic neuralgia. For this, he was treated chiefly with anodynes. When he first came under my notice, he was suffering from partial paralysis of the locomotor nerves of the formerly neuralgic leg. The muscles of one side of the face were also partially paralyzed. His digestion and appetite were irregular. The paralysis sometimes affected the muscles of deglutition. Constipation of the bowels was sometimes so profund as to require croton oil to move them. In investigating his case, I found a patch of psoriasis upon the leg,

affected formerly with neuralgia, and then with paralysis. In this, I believed I had found a key to all his troubles. I put him upon the iodide of mercury, alternating it with the iodide of potash. I could not induce him to give up his employment, which was an unhealthy one. Yet, while at his business, I was, for a few months, enabled to ameliorate his condition. He finally gave it up, after finding that he would often go to sleep upon his post. Just in proportion to the evidences of improvement in the patch of psoriasis on his leg, so did his paralysis subside. To gratify him and his friends, all the usual local applications, used in paralysis—blisters, setons, etc., etc.,—were used faithfully. From none of these did I perceive any result, save to discomfort the patient. During nine months, this patient was kept from becoming worse, and was often greatly improved. But the impatience of friends, ignorant of medicine, at the end of that time, consigned him to the management of a succession of quacks, whose empiricism, starvation treatment, and water cures soon hurried him to the grave.

While this patient was under treatment, I called in my friend Dr. T. S. Stewart, of Marietta. I purposely avoided giving him a history of the case, but left him to investigate for himself at the bed side of the patient. I was much gratified to find, that his investigation led to the same conclusion to which I had come, viz: that the patch of psoriasis on the leg furnished the key to the diagnosis of the case, and consequently to the same rational treatment. If this patient ever had syphilis, the only evidence I ever could discover of it was in the single patch of psoriasis referred to. He was a conscientious man and had no recollection of, at any time, having acquired the disease, nor have I ever been able to discover any fact that would indicate hereditary taint.

I might add other cases, but for the present purpose I deem the above sufficient.

THE TRUE PHYSICIAN.

BY THOS. S. POWELL, M.D., ATLANTA.

Second only to the minister of the gospel, and hardly second to him, in the dignity and responsibility of his position, stands the true physician; both are missionaries of love and mercy; both are brought into intimate relationship with the objects of their labors. Both are charged with interests of the highest importance to the human race. The physician must yield precedence to the teacher of religion, because the soul is of more worth than the body, and because all the questions of time are insignificant when compared with the tremendous issues of eternity, but none other of the relations which men assume towards each other, can take rank with the duties of the physician.

As guardian of the public health, he is charged with one of the chief elements of human happiness; upon his skill, judgment and moral integrity, depend in no small degree the peace, comfort and progress of society. With the welfare, and almost the destiny of his fellow men hanging on his hands, he cannot too highly estimate, nor can he too fully realize the fearful responsibility of his position. It is not amiss that he should magnify his office, if by so doing, he may stimulate his powers for a more complete discharge of its claims and duties. Such being the exalted character of the position, we need hardly say that he who would worthily fill it, must be of an elevated cast. First of all, he must select

the profession, from no base motive; of course a man must expect his vocation to bring him a handsome living, and he who makes the practice of medicine his business, expects pecuniary remuneration for his services; he must have bread for himself and for the family that God may give him; he wants the appliances which wealth alone can supply to enable him to prosecute successfully his scientific studies; but while he may expect pay for his labors, and ought to demand it as a business man at stated times, the love of lucre should not be one of his controlling motives, he should be actuated, instead, by enthusiasm for humanity, by an intense compassion for its sufferings, and a passionate desire to relieve them. This he should cherish with all the fervency of a passion, and all the persistence of a principle.

Like the great Master Physician, whom he should strive to emulate, he should sympathize tenderly with the sons of affliction, and count no sacrifice of self too great, which will ameliorate their ills. With this high enthusiasm in his breast, he will scorn ease and live laborious days. He will shrink from no task however repulsive, if he may by its performance, bring relief to the distressed. He will apply himself with as much ardor to heal the diseases of the miserable occupant of some wretched hovel, as he will, if called to the millionaire, who can reward him with munificence.

To make a fortune out of the sufferings of his fellow mortals, enters not into his calculations, and to promote suffering that his gains might be thereby increased, is a degree of baseness, from which his soul shrinks in horror; nor does he regard the practicing of his profession as a painful burden, which he has raluctantly assumed, and would gladly lay down. On the contrary, he will find a pleasure even in its most unpleasant details, because he has engaged in his profession with the desire to do good. Entering on his

work with motives like these, it is not likely that his energies will flag, or his ardor grow cold. The very act of laboring in the cause of humanity, will intensify his enthusiasm. He will walk the earth as one charged with a mission so holy, that it would be sinful to pause for a moment in its performance. No wintry storms, nor summers heat will cause him to hesitate in the discharge of duty. The allurements of pleasure, and even the enjoyment of home, are disregarded when the cry of anguish calls him away; to these, the objects of his merciful ministrations, he comes with an ever increasing tenderness, with a constantly growing pity. Tell us not that the physician is rendered callous by the practice of his profession. There are natures doubtless that are hardened by familiarity with misery, but such persons are unfitted to labor in the cause of humanity.

There is no need that one's sensibilities be rendered dull or dead, in order that he may discharge the duties of a physician to the suffering. If one's heart be right in the beginning, and he engage in the practice of medicine from love for his race, the more he labors, the greater will his enthusiasm become. Just as the power of the magnet becomes greater the more it is used. The hoary headed physician, provided he be true to the cause in which he has enlisted, has a more zealous benevolence than the young man just entering the ranks. If on the contrary, he grows more indifferent, as he grows older, it is a proof that he should not have chosen a profession, requiring such self consecration—such self denial. This picture of what the physician should be, is by no means too highly drawn. It were not easy to portray in language too strong, the high characteristics which he should display; he should be in all things a model man, and far more than is implied by that term in common parlance. If he would rise to the full requirements of his

position, he must to the virtues of the good man of society, add the graces of the christian. Truthfulness, honesty and candor, he must possess, but it behooves him also to cultivate in a large measure, the qualities of love and mercy. His ambition should be to become a benefactor of his race; he must take for his exemplar the great Physician, whom love of humanity brought from the skies, and doomed to a life of toil and grief. In *Him* this quality of mercy exceeded all others. May it utterly efface the sensual longings for ease, and the greed for gain in our profession! So will the true physician subordinate his desire for fortune, and his thirst for fame, to the one great purpose of benefiting his race. He will hold it his duty to crush every aspiration, which, if indulged, would hinder a full exercise of his benevolent feelings. The only form of ambition which he can consistently indulge is to do good, to leave the world the better for his labors. The reward which he most appreciates, is the gratitude, yea, the love of those whose sufferings he has contributed to lessen. Knowledge, reputation and skill, he values, not for the personal gratification that they may bring, but because they increase his ability to do good.

With him, it is not a mere practical sentiment, but a firm conviction of his intellect, that "the drying up of a single tear, has more of honest fame than shedding seas of gore." No, he would not exchange the pleasure, which he realizes from carrying consolation into the abodes of misery, for the proudest triumph of the conqueror, who boasts of plucking victory from a hundred bloody fields.

Knowledge being an essential requisite of a physician, study, careful, diligent, faithful study is one of his most imperative duties. The young man, who has read for a few months, attended two courses of lectures, and received his diploma, is greatly mistaken, if he supposes that he has

finished his medical education; he has only made a beginning. If he now devotes all the time he is free from the active duties of his profession, to general literature, or worse still to mere idleness, he will assuredly make little progress, and may not hope for distinction. The realm of science, is a vast field; he who would glean, even a slender stipend of its treasures, must be diligent and active.

Fretful and uncertain efforts will accomplish little. There must be persistent and systematic study, not for a day, or a month, but for life. The physician, who studies closely will constantly find new things to be learned from books, and new things in nature, that have never been put into books.

It is by study alone, that he can be what he would seem, a priest of nature raised, by communing with her inner mysteries, to a rank which they alone can attain, who thus devote themselves. We would not say that the physician must cut himself off utterly from all the enjoyments and the refining influences of general literature, but he must make his attention to these, subordinate to his professional studies. If he cannot cull the sweet flowers of beauty, which the hand of genius has strewn in poems, essays, orations and novels without injuring his scientific pursuits, why, he should let the former pass. We would have the physician generally intelligent, but he had better be ignorant of many of the pleasing and popular things of the day and thoroughly understand the science of medicine. This duty of acquainting himself thoroughly with the several branches of his profession, is so intimately connected with his success and reputation, that it may be deemed a personal consideration.

One cannot preserve, in any high degree, his self-respect who is conscious of claiming qualifications which he does

not possess. One cannot long keep ignorance from showing itself, through the thin covering of pretension, and, whenever this occurs, a decline in public estimation will surely follow. It is only by being a physician, in the full acceptation of that term, that one can command the confidence which a physician should have.

But there is an incentive to reach, even beyond this—the mission of a physician is too holy to admit of carelessness; human life is too sacred to be trifled with by ignorant, unprincipled pretenders, who know nothing of their profession.

The physician owes it to his patient, to employ the best powers of his intellect, in his efforts to render him service. It is of too precarious a dependence, to hope that he may be able to study the nature of disease, and the remedies which may arrest its progress, after a person is already smitten down, and is looking to him for relief. He should, as far as in him lies, post himself in the whole range of medical science. He should be apprised of the diseases that are likely to come under his charge, so that he may not be thrown off his guard. Many a person has lost his life because the attending physician felt that he was expected to do something to relieve the patient's imaginary ills, but did not have independence enough to resist the temptation to prescribe unnecessary medicines. Such work is criminal, because it indicates the want of proper study, as well as a lack of the necessary elements that constitute the true physician. and which command the confidence of the public.

The physician should, however, not be satisfied with studying the nature of diseases, and the remedies; he should also, as far as opportunities will permit, study the constitutions and habits of those whom he would most likely be called to treat in sickness (he cannot be too constant or too

careful in his attentions), and should not allow any feeling of false delicacy to prevent him from calling to see them as often as he thinks necessary.

Good, experienced nurses are everywhere scarce, and, in many places, are not to be had at all. It behooves the physician, then, to act the part of a nurse, so far as circumstances will permit, and see that his prescriptions are followed. He should be regardless of either time or trouble in his attentions. The evidence that he is affording comfort to the afflicted, or to their friends, should stimulate him to make every possible exertion in their behalf; and, unless he be thus faithful, he deserves not to be considered a true physician.

There are also correlative duties which individuals and communities owe to such a physician. First of these we may name, their obligation to allow him a fair chance. By this we mean, that he should, when called to treat a case, have ample opportunity of showing that he possesses the qualifications that entitle him to their confidence.

This is not always done. Many persons expect too much of physicians—they think and talk as if the medical fraternity stood pledged to cure all who might be placed under their charge. They speak of it as the fault of the attending physician, that the patient sometimes dies. Now, such judgments are assuredly wrong. The medical fraternity have never promised men exemption from death; should they continue to advance the science infinitely beyond the point it has now reached, they still cannot hope for a time when diseases shall not terminate fatally. It is decreed by Providence, unalterably, that there shall be times, when all the appliances of the most approved sciences shall not avail to arrest the progress of disease. That his patients die, is not then, of itself, a proof of inefficiency in a physician;

nor should he, upon this ground alone, be blamed; more skill may be displayed in the treatment of one that dies, than in some case that recovers. Before he is proved deserving of censure, it must be shown that he has been guilty of negligence, or that he failed to give such treatment as he knew, or should have known, to be most salutary. If he be careless, it is a fault that we would not excuse; if he be ignorant, it is a fault for which we offer no apology. But, what we claim for him is, that the public shall exercise justice in judging his efforts. Let him not be condemned on the word merely of those who take pleasure in fault-finding, and who are incapable of estimating his merits. Those who have a right to judge him, must observe how fully and faithfully he has sought to discharge his duty, and then it would often be difficult to determine whether his failure was his fault, or the decree of an over-ruling Providence. It is not difficult to decide, whether or not, he is a close student, or whether or not he gives strict attention to his business; but, in regard to his skill, the question is not so easy to decide. Some indeed, who claim the name of physician, proudly vaunt their skill and success, and publish to the world certificates of cures which would seem little short of miraculous. These offer inflallible remedies to the afflicted, and were there any truth in their statements, death, save from extreme old age, would be a rare occurrence. Nay, we are not sure but some of these claim to have discovered the precious Elixir for which Ponce De Leon vainly sought—but these, one and all, are utterly unworthy of confidence. It is their deliberate purpose to impose upon a credulous public, and fleece them of money, without benefiting their health. To do this, they set at naught all the laws of the profession, and systematically and persistently violate all the rules of courtesy. They deserve to be ranked as sharp-

ers, whose business is cheating, and they are entitled to no more consideration than the pirate, who plunders on the high seas. We do not mean to say that they are all ignorant pretenders. Some of them are highly cultivated, and well informed, and if they would but conform to the rules of the profession, might be among its brighest ornaments; but one may receive the outside culture of civilization, and yet be at heart a savage.

The Indian of the American forest, boasting of the scalps that he has taken, and the blood that he has shed, has little more of the savage nature than he who seeks to make money by trafficking in human suffering. The pirate, who dooms his victims to walk the plank, is no more cruel, either in his intentions or acts, than he who distills poison, labels them "health-giving preparations," and sells them for gold. If this picture be not overdrawn; if it be true that knowledge and science are necessary for the successful accomplishment of the healing art; if it be true, that moral and professional integrity must be prominent elements in the character of the physician—then, having this knowledge and character, should the people turn away from him, and give credit and confidence to unprincipled pretenders, who are ignorant of the first principles of science, many indeed incapable of receiving the first lessons of instruction? Should such a man be deemed true to science and his own character, who defends the one, when assailed, and the other when traduced? Ought he, more than the earnest christian minister, be accused of being querulous and contentious, when he is simply exercising his knowledge, and faithfully discharging his duty, in condemning quackery and supporting truth, in proclaiming the deception and villainy of designing pretenders and medical demagogues? Surely not. His duty

is to tell the people the truth, to defend it, and to show in season and out of season, the characteristic traits which mark the imposter.

The true physician never parades himself before the public; he endeavors to prepare himself to render medical aid to the afflicted, and he lets it be known that he proffers such services, but he offers no special inducement for patronage. To do so, would be unkind and discourteous to other members of the profession. He will do nothing by word, act, or look, to impair the popularity which a meritorious brother physician may enjoy. He will scrupulously avoid seeking patronage, or enlisting public favor by any undue method. He will, at all times, conduct himself with the bearing of a gentleman, tenderly respectful of their feelings, jealously careful of their reputations. But while he holds this courtesy a duty to members of his profession, who are worthy of their calling according to the standard of the true physician, he does not admit that he is bound to accord it to every one who may prefix "Dr." to his name, or shelter his ignorance and depravity behind a so-called legal diploma. There must be a line of demarkation. Whatever he may think of the empiric, or irregular, as a pri vate citizen, he can not recognize him as a physician, nor yield him the professional courtesy which otherwise would be his due. Conforming himself to the rules of the fraternity, he should require the same conformity in others.

The true physician cannot, without dishonoring his profession, admit to his communion those who are continually violating the laws, governing the profession, either as a member of society or in professional intercourse. Is it not known to all who think and observe, that the key to empiricism and humbugery is "mystery?" I think we, as a profession, have no cause to complain. The sin, in my opin-

ion, lieth at our own door. The people are ignorant of the chief object of our profession, ignorant of our duties to them and of their obligations to us, and it has been the policy of a large number of the profession to keep them so. This is a mistaken policy, and hurtful in principle. Empirics will succeed, and our profession will never attain that point in the estimation of the people, to which its great intrinsic merits justly entitle it, until its members are taught to see, and made to feel this great error, until every derelict member is taught his moral duty, as well as his professional obligation; until the public is made to know fully our objects, and made familiar with our ethics and the laws by which we are governed as gentlemen and as a profession.

It is the solemn duty of the profession, as a body, and of every individual member thereof, worthy of the name and dignity of the true physician, to see to it that the corrupting and impeding barnacles, which have attached themselves to it, shall be removed; that the conduct of every member shall be regulated strictly by the acknowledged standard of medical and social ethics; that no diverging from the true path shall be allowed, or even winked at by the profession; and that the trespassers on forbidden ground—they who despise the demands of the ethical code—shall be held strictly responsible, and, on conviction, be dealt with according to the utmost penalty allowable under the circumstances. This must be done, not only in common justice, but to keep inviolable the peculiar safeguards which wisdom and experience have raised in defense of the profession, and to keep its arcana sacred from the profaning foot of charlatanism, and its altar free from the leprous touch of vice. It will not do for the profession to attempt to screen from the public eye, either incapacity, moral degradation or unadulterated villainy, on the part of any one of its members, on

the untenable ground, that an exposure of the facts, in a case of this description, would militate against the social influence of the profession, or tend to lower it from its high standard of dignity and usefulness. This would be a motive unworthy of honorable men, and, in itself, would condemn us, as a body, to merited public obloquy. To screen that which is wrong or criminal, is to participate in that which is wrong or criminal. We become the abettors of wrong, and crucify our own sense of honor, by applying to the adjudication of such cases the false theory, that the light of truth must be withheld from the outside world, and the so-called *esprit de corps* be maintained at any sacrifice. The barriers of Truth, Justice and Probity, must never be destroyed—even for a moment, or even allowed to be creviced, in order that some favorite malefactor may be allowed to slip beyond, and escape temporary punishment. The sacred robes of the spirit of our profession, must be kept scrupulously free from defilement; the excrescences of immorality, must be cut away with a tender, but relentless hand; the member who sins against the ordinances of the profession, and debauches the virtue of his calling, though he may hide himself ever so much behind that which may seem ostensibly legitimate, or holds up his diploma to screen himself from merited disgrace and punishment, must be made to feel that the rights and privileges of the many, are ever superior to the will and desires of the mere individual, and that "justice must be done, though the heavens should fall." Neither is this Spartan enforcement of rectitude, and the punishment of evil doing, in any way, in conflict with the largest liberality, and most christian charity, on the part of an injured profession.

After due contrition, for the proven fault or criminal act, let the penitent member be received again into full com-

panionship, and, with chivalrous mercy, honorable to all concerned, be his sins forgiven, and the right hand of fellowship extended to him by a noble brotherhood.

The rights, the duties, the mission, the honor of the fraternity vindicated, it can, without fear, challenge the scrutiny of the world, and demand the admiration of mankind. Purged, and purified, its odor shall be as the fragrance wafted from the bowers of Eden, and its name continue to be the synonym of truth, honor, and wisdom.

A great deal has been said in the last ten years on the subject of medical reform, the standard of medical education, et cetera, but nothing has been accomplished for good, and never can be, until a correct public opinion is formed; until a higher standard of moral and preliminary education is applied; until the colleges are required to strictly conform to these laws—to send out their graduates as much enlightened in the duties and objects of their great mission as they are in the technicalities and therapeutical effects of medicine. Let us, then, resolve to begin this great and all important medical reform! Every other science and art is progressing, the age is advancing, time is sweeping on, and, ere we are aware of it, we shall find ourselves outstripped in the march of progress, or left stranded on the barren shores of indolence and ruin. Let us resolve to require a higher standard of education to entitle one to membership in the brotherhood. Let each one of us pledge ourselves henceforth to live more worthy of our noble profession. Let us ever cherish and cultivate that sentiment of fraternal love, which regards the rights and interests of one, as the rights and interests of all. Let the profession do this, and I believe we shall live to see the day, when the science of medicine, with its attendant ministrants, shall stand side by side with the expositors of christianity, and win the grate-

ful praise and profound respect of an intelligent humanity.

Socrates, that purest and grandest of heathen philosophers, in his earnest, but starless, search after the immortal and infinite, deified Æsculapius in preference to all the other gods.

The grand, subtle and mysterious union of body and spirit—mind and matter—neither, Socrates, Galen, Hippocrates, nor Æsculapius, could comprehend, tried they ever so earnestly. But we, who stand in the resplendent blaze of christian civilization, know that they were feeling darkly after the Great Physician of all humanity, and, failing to find Him in His infinite power, and beauty, they paid homage to the science of medicine itself. Does it not seem fitting and possible that the profession should arrive at that pure and elevated plane, where all its representatives shall be christian medical scientists? Shall it not—ought it not to —take a position next to the ministrations of religion, and the accredited minister to the soul of man, and the true ministrant to the body, form a union of strength and beauty, of power, harmony and healing, that shall wrest from physical humanity, its pains, groans and diseases, and, at the same time, point the sin-sick soul to those "crystal waters," that will never fail to cure all its ills, and that flow over golden sands, close by the Tree of Life.

THE APPLICATION OF PRESSURE IN DISEASES OF THE UTERUS.

BY V. H. TALIAFERRO, M.D., ATLANTA.

Professor of Obstetrics and Diseases of Women and Children in the Atlanta Medical College.

Congestion and disordered local nutrition are ruling factors in a large class of pathological conditions of the uterus, comprising some of the most intractable of the non-malignant type. Uterine hyperplasia and hypertrophy are not infrequent results of malnutrition and chronic hyperæmia, and may justly be termed the opprobria of gynecology.

The purport of this paper is to show that *pressure*, as a therapeutic agent, can be made practicable and efficient in these disorders, and that it is no less a remedy of wonderful power in the hands of the gynecologist than the surgeon.

My attention was first called to the action of general pressure upon the diseased uterus in a patient, with hypertrophic elongation of the cervix, whom I had under preparatory treatment for amputation of the supra-vaginal portion. The elongation was supra-vaginal and complicated with complete cystocele and vaginal eversion. The highly engorged and elongated neck, together with the vagina and bladder protruding from the vulva and hanging between the thighs, presented a tumor of considerable size. The inability of the patient to empty the bladder, together with partial strangulation of the cervix by the vaginal orifice,

occasioned great inconvenience and suffering. It was for the relief, of a most violent attack of this kind, that I was first called to see her. She had despaired of permanent cure, and only hoped for temporary relief. The protruded parts were restored to the pelvic cavity by careful pressure with the hand, after first emptying the bladder, and placing the patient in the knee-chest position. A pledget of cotton, saturated with glycerine, was placed in the vault of the restored vagina against the cervix, for the purpose of keeping the parts within the pelvis and for the detergent action of the glycerine upon the congested blood vessels. She felt greatly relieved and was left with instructions to keep the recumbent posture until I saw her again for renewal of the dressing. Upon my next visit, two days subsequently, I found my patient up and at her household work, the parts having expelled the dressing and rolled out again between the thighs in their old position. These dressings were repeated a number of times with imperfect and unsatisfactory results, so far as retention of the mass in the pelvis was concerned, but with great relief of the congestion and tenderness. In order to get rid of the trouble of these repeated dressings, I endeavored to keep the parts restored by means of pessaries, preparatory for operation at my clinic before the medical class. Quite a variety of pessaries were used, and quite sufficient to satisfy me of the utter futility of further effort in this direction. Determined, if possible, not to be thwarted in my efforts to keep the protruded parts within the pelvis, and thereby to give the woman the utmost possible comfort while at her daily duties, she was placed upon her knees and chest and the parts carried within the pelvis to their utmost elevation. Now, with a Sims speculum retracting the perineum, and with the enormous vagina distended to its utmost capacity, the

entire vaginal canal from its vault to the floor of the pelvis was completely and compactly tamponed with cotton; the first pledgets containing glycerine, both for its detergent powers by osmosis, and for its powerfully disinfectant virtues. I was not prepared to say how my patient would bear this new condition of things, for her pelvis seemed to be literally filled with cotton. Her vagina was enormously large, and was capable of great distention and elongation the uterus was free from adhesions, and with the entire pelvic roof was capable of considerable elevation, and so long as the tampon remained, this position of the organs was secure.

When the patient returned to me in three days, as directed, for renewal of the dressing, it was found to be perfectly in place, clean and free from odor. She expressed herself in the most enthusiastic terms as to her improved condition; whereas, before, she dragged along with painful difficulty in walking, she could now move with rapidity, ease and comfort, and had been doing satisfactory work as cook and house servant.

In removing the tampon (which was done in the knee-chest position,) I observed that the cotton pledgets had packed quite hard, from pressure and the wetting incident to the free osmosis, and it occurred to me to substitute sheep's wool for the cotton, which I did in the subsequent tamponing.

Sheep's wool possesses elasticity and resiliency, which it retains under pressure and moisture, and hence is especially adapted to our purpose as a tampon.

My patient was improving rapidly in general health, while her comfort and freedom of locomotion were entirely restored. The tampons were, therefore, continued, not with the least idea of any curative results, but simply with the

view of making her comfortable and improving the general health, preparatory to amputation of the cervix. After a number of tampons, the uterive cavity was greatly reduced in depth, and my astonishment was beyond measure, when, after fourteen days of tamponing, I found, by careful measurement with the probe, that the uterus had lost three inches in its depth. In the beginning of her treatment, the cavity measured *six inches* in depth, from the end of the cervix to the fundus. It now, by careful measurement, gave *three inches.* This unlooked for and remarkable result could only be explained by the withdrawal of the dragging weight of the pendant vagina upon the cervix, and the *direct pressure* of the tampon. The chief agent in this rapid tissue metamorphosis, was undoubtedly *the pressure* upon the soft and spongy uterine texture.

Amputation is now the only recognized method of radical cure in hypertrophic and hyperplastic elongations of the cervix of the uterus, and hence, no other remedy was thought of in this case; but when the time for operation, as given out to the medical class, arrived, the material was unexpectedly gone. This unlooked for result suggested to my mind the application of pressure in all the pathalogical stages of the organ, from the simplest congestion, to its greatest degree of hypertrophic or hyperplastic growth.

To permanently secure the results obtained, it was necessary to reduce the size of the enormous, lax vagina. This was done before the medical class in the winter of 1876, by Schrœder's method, described in his diseases of women, in Ziemssen's Cyclopædia, and which he had performed but once at the time of publication. My own operation, so far as I know, is the second one upon record, and was published in the reports of the Atlanta Academy of Medicine, in April, 1877. From the high estimate I place upon the

operation, I have taken the liberty of copying Schrœder's illustration, which gives at once a fair idea of its peculiar features. By reference to the first operation performed by Dr. Sims, as detailed in his Uterine Surgery, it will be seen that Schrœder's method does not differ from Dr. Sims', except in the manner of introducing the stitches, and is, therefore a *modification* of the procedure of Sims. The modification is, however, a valuable one, and will, doubtless, popularize the original method of Sims, as it meets fully the objectionable features for which its author abandoned it.

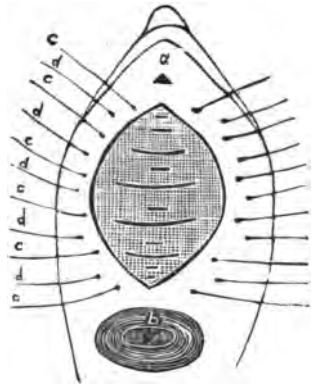


Figure 1.

Narrowing of the anterior vaginal wall by freshening the entire surface, and employing, alternately, superficial (*c*) and deep (*d*) sutures.
a, Orifice of the urethra ; *b*, os uteri. (Schrœder.)

While fully awakened by the case which has been detailed, to the value of *direct pressure* in hypertrophic and hyperplastic growths of the cervix, the wide range of its utility did not impress me until the following case was submitted to its test :

Mrs. S——, from a distance ; thirty-eight years of age ; married eighteen years ; no children ; one miscarriage at three or four months, soon after marriage. Her bad health dates from the miscarriage. For the past few years she had

grown gradually worse, until I saw her the 15th day of October, 1877. I found her in bed, greatly enfeebled, pale, emaciated, and vomiting or retching almost incessantly. The history was that she had for several years been under treatment for disease of the uterus, and for disease of the stomach, with a gradual downward tendency in health. Some five or six months previously, she had taken permanently to her bed, to which she had since been closely confined. So extreme, was her prostration, that she could scarcely speak above a whisper. For several weeks past she had been under able physicians of this city, who, I have no doubt, had subjected her to skillful treatment without relief. She had great loathing for food, and took little in the way of nourishment. I found her taking morphine and whisky freely, and getting partial and temporary respite from her distressing nausea and vomiting only when well under their influence. Her physicians had suspected, from the persistent and aggravated gastric disturbance, serious organic disease of the stomach. The history of her family antecedents revealed hereditary tuberculosis, and she herself had been the subject of two slight hemorrhages from the lungs. She had not menstruated for the past six or eight months. Altogether, the prognosis seemed most unfavorable.

A thorough physical examination revealed a condition of the uterine organs which I thought explained the history of the case from the beginning, as well as her present distressing, and indeed alarming constitutional condition. The uterus was found acutely retroflexed, adherent, greatly congested, and exquisitely sensitive. The periuterine structures were tender and inelastic. Here was a local state of things, quite sufficient certainly, to account for the distressing symptoms. Distant pathological sympathies had so nearly masked the real seat of trouble and had so well mim-

icked organic disease, that an error in diagnosis could hardly be reprehensible. The blood taint is an unfortunate complication here, and it is impossible to say now, how much it may be in fact a pathological factor.

It was determined to stop as rapidly as could be safely borne, the *opiates and stimulants*, and if possible to introduce a larger amount of nutrition in the patient's blood. It was, at the same time, determined to carefully test the efficacy of *pressure by the tampon* upon the congested and tender uterine organs. In view of the existing blood taint, this must be graduated with great care and delicacy, lest we kindle up an active pelvic inflammation.

The patient being placed in the left lateral position of Sims, a small tampon of cotton saturated with glycerine was placed in the vaginal roof through Sims' speculum. She was put upon Valentine's meat juice and wine of pepsin, with instructions to diminish one-half the morphine and whisky. The following morning I was encouraged to find my patient feeling better, having vomited but little and slept better than for weeks. The whisky and morphine had been decreased as directed, and the nourishment had been taken regularly. The uterine dressing was removed and another applied of larger size. *From this time there was no vomiting.*

The following morning wool was substituted for the cotton, and the tampon increased in size by one or two small pledgets, and so on every morning until the vagina was filled perfectly and compactly to the pelvic floor.

The patient rapidly gained in strength and flesh, and in less than two weeks had left off entirely the opium and stimulants, except the wine of pepsin taken with the beef. The tampon remained, at first, one day; subsequently two, and finally three days. So soon as the strength permitted, she

was placed by her nurse in the *knee-chest* position, as the preferable one for the application of the tampon.

After some three weeks of treatment thus kept up, and the general and local conditions greatly improved, I ventured upon the careful introduction of the probe. As the instrument entered the cavity, just within the internal os, and turning backward in the direction of the retroflexed body, the patient cried out with pain. She was greatly overcome by the shock and the whole muscular system, seemingly, thrown into a tremor. Feeling apprehensive, lest I had ventured too far, the tampon was reapplied, the first pledgets, as usual, containing glycerine. Directing my patient to send for me should the pain continue, I left her, fully expecting to be re-called, but, not hearing from her, I did not return, until the regular interval of three days, when I found her doing well, her eyes and voice greeting me with a bright and cheerful welcome. The probe was again introduced, and subsequently at every dressing, with progressively decreasing pain, until it no longer gave the least unpleasant sensation.

The position of the uterus, now some five weeks under pressure by the tampon, was greatly improved, and the adhesions, so far as could be ascertained, giving way. The capacity of the vagina had considerably increased, so that a much larger quantity of wool was necessary for the packings, which were now made quite firm. She was able to walk about the room unassisted, and sat up, a large part of every day. The tampon and probe were continued about two weeks longer, when the adhesions, congestion and tenderness were thought to be sufficiently destroyed to attempt complete and permanent reduction of the organ. This was done by placing the patient on her back and introducing a hard rubber stem, with small vaginal bulb, when the body

of the uterus was, easily and without pain, lifted up to its normal position, by carrying the bulb of the stem, with two fingers placed against it, back upon the posterior wall of the vagina toward the hollow of the sacrum. This method of replacing the retroflexed uterus belongs to Schrœder, but the principle is found in *Sims' repositor.* I like it, for this purpose, better than the repositor, because of its greater simplicity and easier manipulation.

The uterus, with the stem, was now secured, by Albert Smith's pessary (modification of Hodge). These gave her no discomfort, immediately—nor did they subsequently. After some two weeks, the stem was removed, the vaginal pessary remaining, with the uterus perfectly secured in position. The patient was now taught to remove and introduce the pessary herself. She was able to go visiting, walking several blocks, and, in a week or ten days, was sent to Southwestern Georgia to her husband, and to a climate more congenial to her delicate lungs. She has continued to improve in strength, and now walks as far as three or four miles at one time, without discomfort.

My first visit to this patient was October 15th, and last visit December 20th, following, being just a little more than two months under treatment.*

Case 3.—Mrs. S., of this city; age, twenty-four; married two years; pregnant four months after marriage, and miscarriage at six and a half months of pregnancy. Her bad health, and confinement to bed, dates from this miscarriage; has not been out of bed for more than a year, and, the greater part of this time, unable to sit up. The promi-

* I neglected to mention, at the proper place, that this patient had menstruated without the least pain and discomfort once while under my immediate care. I saw her recently, while on a visit to this city, in May, 1878. She tells me that she has menstruated regularly, and without pain. The menstruation had previously (dating from her miscarriage) been excessively painful.

nent constitutional symptoms are, great debility and nervousness, emaciation, nausea, anorexia, and sleeplessness. The prominent pelvic symptoms are, painful bearing down in the pelvis, attended with a constant and distressing burning sensation. There is no history of hereditary blood taints, and, altogether, a good record as to physical stamina. Physical exploration revealed a marked retroflexion and highly sensitive uterus, with endometritis and granular erosion of the os. The organ was movable, but not altogether free from adhesions. She had been treated with caustics, tents, vaginal douches, and a variety of pessaries. The able and skillful gentleman who had her last in charge, and who has had a large gynecological experience, I am sure submitted her to appropriate and skillful management, both topical and mechanical. Encouraged by results in preceding cases, which had so far exceeded my expectations, I determined to use *pressure* in this.

My first visit to this patient was November 7th, 1877. As she was nearing her menstruation, nothing was done except the daily application of the cotton pledget, with glycerine, for several successive days, after which, her period coming on, I did not see her again until November 25th, some four or five days after the menstrual cessation, when the first tampon was applied. The vaginal canal was small, the mucus membrane red and irritable, and the posterior vaginal wall shortened, and without its usual deep cul-de-sac at its cervical junction. Only a partial tampon was, therefore, applied at first—the vault of the vagina being well packed, and about one-half of the canal filled with the view of gradually inuring the vaginal walls to the pressure and the presence of a foreign substance, and, at the same time, to make more capacious, by gradual distention, this part of the vagina.

The tampon was removed every two days at first, and subsequently every three days. Its application was kept up continuously, being left off only for menstruation, (and once to test the tolerance of the organs to the intra-uterine stem and vaginal pessary,) until February 10th, when the tenderness and congestion having disappeared, the posterior vaginal wall and cul-de-sac restored to normal dimensions and the general health so far improved that she was out of bed the greater part of the day, and walking about her room. It was now determined to leave off the tampons and resort to permanent replacement by pessaries. A flat zinc and copper stem, two inches in length, was introduced and the uterus replaced by Schrœder's method, and the whole secured in position by Albert Smith's pessary. These were worn without discomfort, and with progressively increased improvement for two weeks, when the stem was removed and the vaginal instrument left in place. The patient in the mean time has been improving in general health, the pelvic, nervous and sympathic troubles having disappeared with the exception of still a slight indigestion. She is up all the day, walks where she wishes, and rides out to Ponce de Leon Springs, three miles from the city.*

Case 4.—Mrs. F., thirty years of age—married—three children; youngest six years of age. Bad health dates from the last labor. There has been no miscarriage. No history of hereditary taint traceable. Has been alternately in and out of bed for six years, with gradual but perceptable decline in general health, and for the past two months closely confined to bed. The prominent constitutional symptoms have been nausea and vomiting, painful oppression in the chest, great nervousness with occasional paroxysms of what

* She is now, June 17th, 1878, visiting friends in a distant part of the State, and as a matter of security, still wears an Albert Smith pessary, which she has been taught to remove at night and apply in the morning.

she terms "spells." She is emaciated, weak and despondent. There is no appetite, and she invariably spits up her food after each meal, with occasional vomiting in the intervals. The bowels are constipated. She sleeps badly. Menstruation recurs every three weeks, lasting four days with aggravation of the symptoms. There is a dragging heaviness in the pelvis, and a constant painful pressure in the right iliac region extending to the hip. This, with the oppression in the chest, occasions more distress and anxiety than all the other troubles.

This woman had been under the management of an able and skillful gentleman for the past three years, with alternate periods of improvement and relapses, and the alternate periods of hope and despair so usual to such cases. Physical exploration revealed marked anteflexion, congestion and enlargement of the uterus. The cervix was very large and hard, and the walls of the canal so firmly approximated by the hypertrophied tissues as to make it difficult to introduce a small probe. The os was abraded and granular, and its broad slit firmly compressed. The physical condition of the uterus, together with the general history, leaves but little doubt of the existence of subinvolution as the basis of the now complicated pathological condition of the organ. To the subinvolution has been superadded, displacement, congestion, and the areola hyperplasia of Thomas, endometritis and granular erosion of the os. Quite a complication truly, and yet such as will be recognized by the gynecologist as of frequent occurrence, and the most intractable, certainly of the non-malignant diseases, of the uterus. This is the chronic parenchymatous metritis of the old, and still of most of the modern writers. It is the chronic infarctus of Kiwisch—the diffuse proliferation of connective tissue of Klob, and the areola hyperplasia of Thomas. It is the opprobrium of

gynecology, and encountered always with grave apprehensions as to cure. This is the disease of our patient, broken down in health, bed-ridden and emaciated.

This patient came under my professional care January 20th, 1878, when the first tampon was applied. From this time the nausea and vomiting, and the painful pressure in the pelvis disappeared, with very partial returns of the pelvic symptoms at the menstrual periods, but no return at any time of the vomiting. The tampons have been continued (being renewed every three days) up to the present time, April 17th, 1878, except during menstruation.

It will be remembered that this patient menstruated every three weeks profusely. The first *period* after the commencement of treatment she went to the full time of twenty-eight days. The second menstruation went two or three days over time, and the third period ten days over time. The menstruation has been attended with much less discomfort, and the quantity, according to the patient's account, quite normal. She has gradually and perceptibly gained in strength and flesh. She sits up most of the day, and walks about the house and yard. The uterus originally measured three and one-sixth inches in depth of cavity. It now measures a little under two and one-half inches in depth. The displacement has been sensibly improved; the large indurated cervix has been greatly reduced, and looks quite normal in size and condition. Indeed, the whole organ is wonderfully improved in its general condition, and has every appearance of a near approach to a healthy standard.

My first visit to this patient was January 20th, 1878. She has, therefore, now been under treatment up to May 20th, 1878—just four months.*

* At the time of writing, the uterus in case 4 measured a little less than 2½ inches in depth. Since this time the uterus has gradually decreased in size under the pressure, until its measurement, June 5, 1878, was two inches, when the tampons were suspended and a metalic stem pessary introduced. She is now, June 15th, menstruating with stem *in situ*.

These cases have been selected from among many which I have treated by this method. They are typical cases, and serve to illustrate my purpose. It is unnecessary here to discuss the value of pressure, or the method by which it acts. It is known to possess marked and decided powers, and especially so in parts where circulation and nutrition are impaired, and the blood vessels have lost their tonicity. As a sorbefacient, it is positive and speedy in its action. Prof. Gross likens it to mercury. He says: "The general effect of the bandage would seem to be somewhat similar to that of mercury, controlling capillary action, and promoting the absorption of effused fluids." If it can be successfully applied to chronic diseases of the uterus, as the foregoing cases would indicate, it must bring to gynecology a boon which, in time, will supplant much of our unsatisfactory uterine therapeutics. In the treatment of chronic congestion, subinvolution, hypertrophy, hyperplasia, and such like intractable conditions, we are constantly and painfully reminded of the incompleteness of our resources, and any remedy making reasonable pretentions to improvement upon the old *regime* so vigorously and confidently inaugurted by Bennett, must receive a glad and joyous welcome.

METHOD OF MAKING PRESSURE TO THE UTERUS.

"The vagina is a musculo-membranous tube remarkable for its extreme dilatability. . . . Elastic elements everywhere pervade this musculo-membranous structure, forming an enormously dilatable channel of communication between the external genitals and the uterus. . . . . The two columns—probably the transverse processes, also—are not exactly opposed, permitting a kind of dovetail approximation of the antero-posterior surfaces, and so more effectually closing the vaginal canal."—*Savage.* Its outlet is narrowed and contracted by the structures forming the pelvic floor,

and chiefly by the ischio-pubic muscle and the perineal body. Its vault receives the neck of the uterus, to which it is attached, and in such a manner as to form the vaginal cul-de-

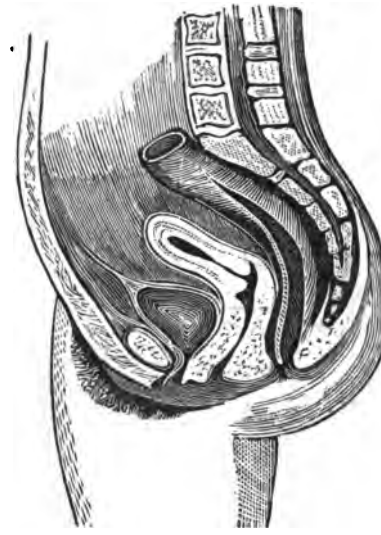


Figure 2.

Normal position of the uterus and vagina, imperfectly showing the narrow vaginal canal, with its closely approximated walls. The recto and vesico-vaginal septa are represented too thick.

sac. The vagina, then, in its natural and undistended condition, is a narrow, closed canal, its surfaces closely fitted by dovetail approximation; but when distended to its full capacity, by placing the woman upon her knees and chest and lifting the perineum for the admission of air, as so clearly taught us by Dr. Sims, all is wonderfully changed. Instead of the closely approximated and narrow canal, we have an enormously distended channel, in which, ordinarily, the finger sweeps without touching either sides or summit. The cervix, before easily reached, is now beyond the touch, and, instead of dipping into and resting upon the vaginal vault,

it hangs from the upper extremity of the vagina, and occupies, with the whole pelvic roof, the utmost elevation.

In this changed condition of things we find the vagina presenting in shape somewhat that of an irregular cone, with its base above and apex below; and in this changed condition, with the uterus *hanging from the vaginal vault from one to two inches higher* than its normal position, the tampon is applied, filling completely and compactly the entire vagina.

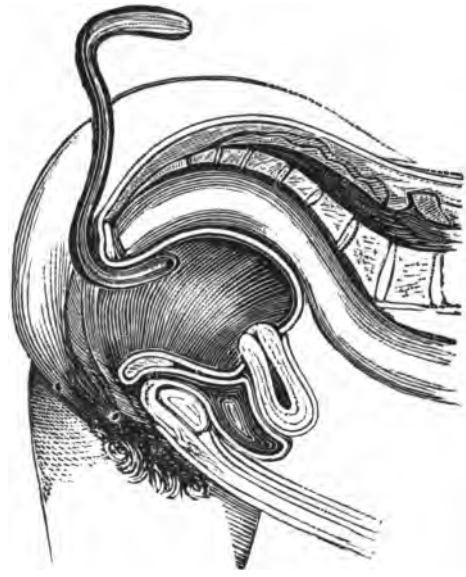


Figure 3.

The vagina dilated to its greatest capacity, with the uterus suspended from its vault at the utmost degree of elevation.

The knee-chest position being now exchanged for the usual and normal positions of the woman, the gravitation of the viscera is directed to the pelvic outlet instead of from it. The effort of the parts to seek their old positions meets with resistance, below, from the tampon and pelvic floor, and above from the force of the superimposed viscera

and abdominal muscles. Here then we have a pressure certainly moderate in degree, *but positive and continuous.*

All must acknowledge the power of continuous pressure, however small in extent, upon the living structures. I claim for the tampon moderate, constant, equable and elastic pressure upon the entire uterus, but greatest upon the cervix.

METHOD OF APPLYING THE TAMPON.

In applying the packing, it should always be borne in mind that the vaginal canal *must be distended and elongated* to its utmost capacity; and the uterus must occupy its *utmost degree of elevation* in the pelvis. These can be obtained only *in the knee and chest position*, so accurately detailed by Dr. Sims.

The material for the tampon should be of *sheeps wool.* Its elasticity and porosity especially fit it for this purpose. It should be clean and carded into bats, and properly disinfected with carbolic acid. The essential prerequisites then for the packing, are: *the position of the woman*, Sims' speculum, dressing forceps and sheeps wool.

Before a good direct light, across the bed, upon a good hard mattress, or better, upon a table, the patient is placed upon her *knees and chest*, with the knees *directly* under the hips, and a little separated. The thighs should be *perpendicular and at right angles with the table.* "She must not arch the spine upward, for this brings into forcible action the abdominal muscles, which should be pefectly relaxed, with the spine rather curved downwards, as we see it in swaybacked animals. With these precautions fully impressed on her, she is to breath easily, and relax the muscles of the abdomen." (Sims.) Dress strings and corsets should be removed or loosened completely. Many women, usually short ones, are unable to bring the chest flat upon the table,

but they can "bend the body forward until the head is brought down to the plane of the table, where it may rest in the two hands, its weight supported on the left parietal bone, while the *elbows are thrown widely out from the sides.*" (Sims.)* The *outstretched elbows* bring the chest as nearly as possible always upon the table. These details may appear tediously careful, but without an attentive observance of them, the tampon will fail in its objects.

The carded wool bats should be broken into small pledgets, or separate pieces; the patient in position as described, the perineum elevated, with a short and broad blade, Sims' speculum, and we are ready for the packing. The first one

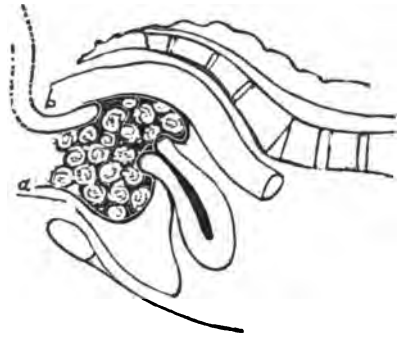


Figure 4.

The vagina packed in its dilated condition, with the uterus at its greatest degree of elevation. The vagina is represented here as loosely filled, in order the better to show the manner of applying the tampon.

or two pieces of the tampon to go immediately over the cervix should be *cotton*, well filled with the best quality of glycerine. The cotton holds the glycerine better than the wool. These little pieces should contain as much glycerine as they can be made to hold, by placing the cotton in the palm of the hand and rubbing in the glycerine, little by little, until it is a pulpy mass. These may be placed, with the

* Italics mine.

dressing forceps, immediately upon the cervix, or one behind it, and the other in front. The pledgets of wool are then successively applied dry, each one being first rolled upon itself rather tightly in order to give the requisite firmness and solidity to the packing. The vault of the vagina is first well filled, and the packing proceeded with *carefully*, the pledgets rolled upon themselves, being placed here and there, and *packed* with probe or dressing forceps; all parts of the vagina being packed as equally firm as possible, and yet not too solid at any point for discomfort. The vaginal canal is thus filled down to the muscular floor of the pelvis, but not below it. If the vaginal outlet is distended it will give discomfort, and a portion of the tampon may be lost. The vaginal orifice should close over the filling.

THE THERAPEUTIC ACTION OF PRESSURE ON THE UTERUS.

The therapeutic effects of pressure by the tampon upon the uterus, are much the same as pressure elsewhere. We may safely classify its field of action as follows:

1st. It diminishes blood supply and nutrition.

2nd. It is in the first degree a sorbefacient.

3rd. It destroys redundant tissues by destructive metamorphosis.

4th. It diminishes nervous action.

5th. It rectifies malpositions.

In this classification, we recognize a wide field of action, adapted to a variety of important pathological conditions of the uterus, among which may be found the most intractable in the whole range of gynecology. Subinvolution, hypertrophy, hyperplasia, congestion, chronic inflammation, inflammatory deposits, fibroid growths, and uterine hyperæsthesia come especially within the compass of its action.

EFFECTS OF THE TAMPON UPON THE VAGINA.

Without experimental knowledge of the operation of the tampon in the vagina, I would be led to suspect frequent intolerance and other unpleasant effects. Such, however, is not the case. Vaginitis, irritable canal, and *acute* inflammation in the pelvic organs, contra-indicate the tampon, and, when they exist, should be removed or modified before putting and keeping the canal on the stretch. Such conditions of the vagina may be very effectually remedied by commencing with very small tampons, applied only to the vaginal vault, and *gradually* increasing them to the full size. In the subinvoluted and lax condition of the vagina, so frequently accompanying diseases of the uterus, it has the effect of gradually restoring the healthfulness of the canal.

If the tampon is firmly applied in the beginning of its use, it will frequently cause abrasions upon the vaginal wall, which may necessitate its discontinuance for a few days. The vagina should always be, at first, lightly packed, or, as I frequently prefer, *partially packed*, filling simply the vaginal vault. A little simple cerate upon a soft cloth, applied to the abrasions when they occur, will enable us to continue the packing, when desirable, and heal the abrasions at the same time.

Now and then a badly-shaped vagina is found, especially in connection with old versions and flexions, causing partial loss of the tampon ; and, in very fat women, the dilatation of the vagina is, at first, not sufficient to give the packing the cone-shape necessary for its retention, and it may be partially, or entirely, expelled. These difficulties, however, are exceptions, and are gradually overcome, as the canal becomes more capacious, and normal in shape; so soon as the cul-de-sacs and vault of the vagina have enlarged, and we

can give a more decided cone-shape to the tampon. The tampon is retained without difficulty when its base is above and its rather broad apex rests below, upon the pelvic floor. The few days rest the vagina gets, during menstruation, when the packing is always left off, is quite sufficient for months of continuous treatment.

In his uterine surgery, Dr. Sims calls attention to the existence of a constriction of the vagina in its superior portion, just below the cervix. My observation is that most vaginas have this *superior constrictor vaginæ*, and often not observable until the vaginal canal has been well dilated by the continuous use of the tampon, when it becomes distinct and prominent. This constriction is more marked posteriorly, and at this point occasionally becomes the seat of abrasions from the pressue of the packings. The intervention of a piece of soft cloth with a little cerate to protect the abraded surface from contact with the wool and a little lighter packing just at this point, is all that is necessary for speedy reparation.

The dilatation of the vaginal canal consequent upon the continued use of the tampon, can have no bad results upon the normal and healthy vagina, and upon the mal-formed, and large subinvoluted vaginas, the final and permanent results are the most satisfactory.

The effects of the tampon upon the distant and distressing sympathies, are often of the most gratifying nature. In case second this was especially noticeable. The vomiting had been continuous and alarming for five consecutive months, and the patient did not vomit after the second tampon. The prominent and leading constitutional distress is often the first to disappear. In case three, nausea, and in case four, neausea and vomiting, were prominent and distressing

symptoms. In each, these disappeared, from the commencement of treatment, not to return again.

In cases two, three and four, the patients had been, for different lengths of time, closely confined to bed from two to twelve months respectively. In each case the patient was walking everywhere in a few weeks.

These results are remarkable, and are such as are certainly not attainable in similar conditions and in the same length of time by any other known method of treatment.

THE COMPARATIVE MERITS OF PRESSURE.

Taking a case of the so-called *chronic metritis*, with its usual complications, in illustration, the treatment would be, according to the most approved and recognized methods, by cauterization, scarification, leeching, tents, or the milder alterative method of iodine, bromide, etc. These are used singly or combined according to the peculiar fancy of the operator. And, efficient work is recognized, if in twelve or eighteen months, a perceptible softening in the indurated tissues has occurred; a slight diminution in the bulk of the enlarged organ, and a perceptible decrease in its sensitiveness with corresponding improvement in the constitutional sympathies and the general health. I am sure I make no exaggeration, (and the cases reported bear me out,) when I say that I have accomplished more by *pressure* with the tampon in a few weeks, than could have been done in months by the usual methods.

1. We have, then, as important comparative merits, *more immediate and speedy results.* This is certainly a desideratum when we consider the long time necessary, and the uncertainty of cure in sub-involution, hypertrophy and chronic metritis.

2. In the usual methods of treatment by caustics, sponge tents, etc., if a safe rule is adopted, the patient is in bed from

three to ten days, according to circumstances, at each treatment. By the tampon, there is not only *no confinement to bed*, but the ability of the patient to exercise to the extent of her strength without damage, is greatly increased. Thus are we enabled to contribute materially to the pleasure and comfort of the patient, as well as to the greater security and improvement of her general health.

3. Treatment by the tampon suspends absolutely the *sexual relations*—a matter oftentimes of considerable importance in the results of treatment, and one, too, in which we so often fail to get voluntary co-operation.

4. The inflammatory accidents incident to other efficient methods of treatment do not apply to the tampon.

5. While caustics and the curette harden the tissues and close, more or less, the uterine canal, *pressure by the tampon* softens the tissues and dilates the canal.

6. Caustics and the curette establish alterative and healthy action by a sacrifice of structure, and a sacrifice oftentimes damaging and irreparable, while, by the tampon, the integrity and identity of the tissues are in no way interrupted.

The thorough scraping of the uterine cavity by the curette, in fungus degeneration of the mucous membrane, must, in a certain proportion of cases, remove the mucous membrane, not only entirely, but permanently; and still more frequently must we have the same results from strong caustic applied to the cavity. The fuming nitric acid applied to the uterine cavity, as taught by Dr. Athill, is, with many, a favorite method of treatment, and, in my opinion, if efficiently done, as taught by Dr. Athill, will rarely fail to destroy completely the mucus membrane; and in such removal we can have but one result, viz: cicatrical tissue, in place of mucus membrane, lined with polymorphous epithelium, in place of the delicate, ciliated columnar. Following such important

textural alterations, sterility and uterine hyperæsthesia, with their train of evils, must almost of necessity come, and with them a permanent pathological condition of the organ.

While I cannot, as yet, bring forward any considerable number of cases of fungus degeneration of the mucus membrane of the uterine cavity treated by the tampon, its invariably prompt beneficial results, controlling the menorrhagia and metrorrhagia at once, attest it a remedy of decided powers in this direction.

In 1856, at the Woman's Hospital, Dr. Sims accidentally discovered the power of the sponge to destroy polypoid growths of the uterus. A large fibroid polypus, filling up completely the uterine cavity, was destroyed by the pressure and drainage of a sponge, which had been forgotten, and left in place for a week. He, and Dr. Emmet, subsequently destroyed small polypoid tumors and fungus granulations by means of the sponge. Dr. Emmet was very fond of the sponge for general hypertrophy, and, according to Dr. Sims, claimed to have often succeeded in doing more in such cases, in a week's time, than could be accomplished by any and all others in two or three months. The occasional septicæmic poisoning and inflammatory troubles occurring from the sponge, have deterred many, and made all more or less timid in its use.

More recently, some of our English friends have claimed originality in the destruction of small fibroid growths of the uterus by the pressure *of tents*, combined with caustics and packing, to the cavity of the uterus. The idea belongs to Dr. Sims, whatever variety of tent or packing to the uterine cavity be used, and the use of powerful caustics, in connection with the tents, is certainly not an improvement upon the method of Sims', and, to say the least, it is of doubtful propriety.

Small tampons of cotton have long been in use as temporary pessaries is displacements. Dr. Sims thought well of them, and applied them always with glycerine. He devised a port-tampon, for their ready application by the patient.

Dr. Thomas, in his Diseases of Women, recommends pledgets of cotton placed in the posterior and anterior vaginal cul-de-sacs, and the vagina lightly filled with cotton to keep these in place, in posterior displacements, as a temporary and preparatory measure for the use of pessaries.

Schrœder adopts a somewhat similar plan in certain displacements.

Prof. Fordyce Barker, in 1853, wrote a paper on the treatment of procidentia by the use of tampons wet with a solution of tanin.

The tampon used in the manner which I have indicated, and for the purpose of *pressure*, has not heretofore been done.

Where there are complications of endometritis, fungus degeneration of the mucus membrane of the cavity or granular erosion of the os, I frequently combine, with the tampon, other means of local treatment. Iodine or iodoform occasionally applied to the diseased cavity may advantageously precede every other application of the tampon. In fungus degeneration of the mucus membrane laminaria, or better, Sussdorffs tupelo tent may be applied to the cavity and the tampon over it. By this means we make pressure from within as well as from without. My friend Dr. Simpsom, of this city, tells me he has recently been using the cloth tents, gradually increasing the size, with iodoform, in conjunction with the tampon with very satisfactory results. In my own cases, when I think it best to combine other means of treatment with the

tampon, I usually select Sussdorffs tupelo tents, or my own cloth tent.

The cloth tent is always preferable when intra-uterine medication is desired in conjunction with intra-uterine pressure. With this tent we may apply to the diseased cavity, very thoroughly, iodine. iodoform, zinc, cantharidal cerate, etc. Iodoform, to the cavity of the uterus and to granular erosions, is a great favorite with me, when used with the tampon. Applied as a plaster to the cervix, it is kept smoothly and perfectly in place by the tampon until removed. The iodoform is a mild and pleasant stimulant and alterative, and at the same time a local sedative. These mild and simple measures are usually quite sufficient, when used with the tampon, for endometritis, erosions, and fungus mucus degeneration, and the uterus is saved the rough usage and bad results incident to caustics and curettes.

In advocating any special method of local uterine treatment, I would not wish to be understood as under-estimating the value of constitutional treatment, adapted to the particular requirements of individual cases. In subinvolution, for instance, ergot is an important aid to any local method in the re-instatement of the suspended involution. In areola hyperplasia, the so-called chronic metritis, ergot is an invaluable agent in the establishment of the retrograde metamorphosis necessary to restoration of health in the organ.

Guiac will meet the constitutional indications in many cases, particularly where there exists a gouty or herpetic element. We must not forget to look to such important auxiliary constitutional measures, in the special conditions calling for them, as may be found in cod liver oil, iron, iodide of potassium, and bi-chloride of mercury.

THE PITH OF THE DRIED CORN-STALK AS A UTERINE TENT;

AND

GENERAL REMARKS UPON THE USE OF UTERINE TENTS IN GYNÆCOLOGICAL PRACTICE, WITH CASES.*

BY W. T. GOLDSMITH, M. D., ATLANTA.

Uterine tents are most valuable agents in the hands of the gynæcologist. They have a two-fold value, as diagnostic and therapeutic instruments; and so deserving are they in these respects that their usefulness has been fully recognized wherever the treatment of the diseases of women has attained anything approaching scientific importance. Uterine tents were not unknown to the ancients. Aetius, referring to the causes of sterility, assigns one of these to contraction of the os uteri, and points out the use of compressed sponge as a remedial means. Sir J. Y. Simpson, in his lectures, speaking of the supposed discovery of Dr. McIntosh in dilating the os and cervix, remarks: "Dr. McIntosh, a medical teacher of great reputation in this school some twenty-five years ago, thought he was the first to call attention to this particular (obstructive) form of dysmenorrhœa, and proposed to treat it in the same manner as surgeons do strictures of the urethra." * * * "The plans of treatment then recommended by Dr. McIntosh was fore-

* A few typical cases, only, are given.

stalled ages before. For, in works included among the Hippocratic writings, the disease is most distinctly spoken of, and the appropriate treatment described. In the 13th section of the *Γυναικείων Πρῶτον* the treatment of these cases is given where sterility is due to some unusual conditions of the os uteri; and among other things, the writer tells us that where the orifice is very much contracted, it must be opened up with bougies and leaden instruments. So that this plan of treatment is at least 2,500 years old. Some others, among the older Greek and Roman writers on female diseases, have also alluded to this form of dysmenorrhœa or sterility, and to its treatment by dilatation of the os uteri, though none so distinctly as the Father of medicine himself. But there are various surgical works of later date in which mention is made of this matter in the most explicit terms. Thus, in the *Marrow of Chirurgery*, published in the latter part of the seventeenth century by Mr. Cook, of Warwick, a work containing many curious notices and cases in obstetric, medical and surgical practice, this author treats in one of his chapters of closure of the "inner orifice" of the womb, or os uteri, and recommends it to be enlarged when necessary by gentian root, prepared sponge and afterwards by the introduction of hollow instruments of silver, ivory or horn, and these means, he adds, are better than incision."

Uterine tents have been made of many different substances. Ivory has been thus employed from which the boney matter was abstracted by hydrochloric acid. Dr. McIntosh and others used metallic bougies of graduated sizes for the successive dilatation of the cervical canal. Dr. Priestly employed expanding forceps the size of the ordinary uterine probe. Cotton, tow, wool, cloth, india-rubber, roots of various plants, have been advocated and used. The

most commonly employed substances are the compressed sponge and laminaria digitata or sea-tangle.

Dr. J. A. McFerran, of Philadelphia, Pa., endeavoring to avoid the dangerous consequences often attending the use of the sponge tent, employs the following, which may be inserted here, among the varieties of tents: He fixes a sponge tent upon the extremity of a metallic or hard-rubber tube, which he envelopes, by a close-fitting piece of thin rubber. Fluids reach the tent, from the vagina, through the tube. The sponge is dilated, while the mucus membrane is protected by the rubber.

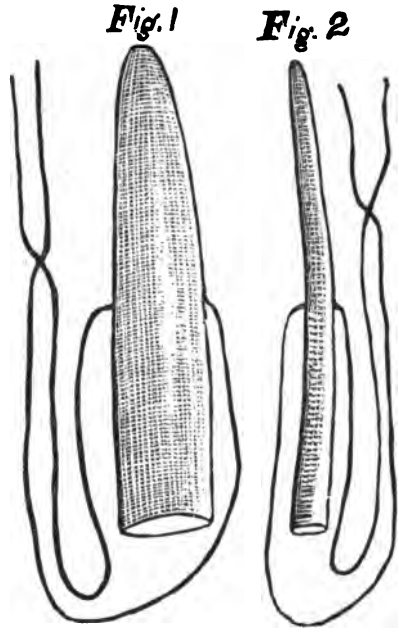
Among the inventors of uterine tents, our State has already furnished two. My friend, Dr. V. H. Taliaferro, of this city, a few years since (1871), published his discovery of the cloth tent. Dr. Taliaferro's tent is well known. Some Western physician, whose name I do not now remember, claims to have improved Dr. Taliaferro's tent, by the use of bonnet wire, around a bent strand of which he rolls the cloth. By this improvement, he claims to secure greater rigidity, and increased facility of introduction, without impairing the usefulness of the tent. Another Georgian, Dr. G. E. Sussdorf, formerly of Macon, now of New York city, has, within the past year, published a description of a tent, which he manufactures, from the root of the tupelo tree. The expansive power of the compressed tupelo root, he asserts, is considerable. This root is, however, rather difficult of procurement, and, before it can be used as a dilator, must be subjected to compression, by instruments, not always conveniently at hand.

I have the pleasure of bringing before the profession a new candidate for their consideration, as a uterine tent. It is the pith of the dried cornstalk. It may, or may not, have advantages over other materials, manufactured into tents.

I will permit the profession to determine this matter. To my mind, there are many points of superiority. These points will be developed, as I proceed with the reading of this paper. I will, however, pause long enough to show the ease and rapidity with which they can be made. You take a joint of the dried stalk; strip it of its cuticle, and compress the pith, slowly and firmly, between the thumb and index finger. You see how compression, made in this way, diminishes its bulk. By continued pressure, you easily reduce it to four or five times less its original size. You can compress it to any intermediate size; or, it may be used without compression, to carry medicaments to the interior of the uterus. Because of its ready compression, to any desired bulk, you have the tent entirely under your control. Slight compression will give you moderate dilating power. Compress it as much as possible, and you can get a dilating power equal to the sea-tangle, or sponge. You may compress the pith first, and afterwards, with a sharp knife, trim to the desired length and size; or, you may first cut the pith, to the size you wish it to dilate, and then compress it for easy introduction. Any curve may be given the tent, by selecting a piece of pith that has been curved in its growth. The pith absorbs fluids readily, and, when compressed, expands, by such absorption, to its original size.

The wood-cut shows the degree of compression to which the pith may be subjected. Fig. 1, shows a piece of pith (with string passed through it, by means of a needle,) cut to the size, to which the cervical canal in a given case, may be desired to be dilated. Compressed by the thumbs and fingers, it is reduced to the size of fig. 2. The cut represents the actual size and preparation of a tent. To reduce fig. 1 to fig. 2, required *one minute and a half*, by the watch. After introduction into the cervical canal, fig. 2 will expand to the

size of fig. 1. More rapid expansion may be had by pricking the surface of the compressed tent, or by forming a canal through the tent, by first inserting a wire through the lenghth of the pith, before compressing it.



As before stated, uterine tents have two important uses—for diagnostic and therapeutic purposes. Tents are employed for dilating the entrances to the cavity of the uterus, that the finger, as well as the eye, of the gynæcologist may determine the pathological disturbances of the interior of that organ. When symptoms point to the existence of intra-uterine polypi, dilatation by tents afford the utmost satisfaction in clearing up the diagnosis. In speaking of determining the presence of intra-uterine tumors, Sir J. Y. Simpson remarks: "Many years ago, I saw, with my friend, Dr. Alexander Wood, a patient who died of menorrhagia, and in

whom, after death, we found a polypus which was in process of being eliminated by the uterus; and it was here so manifest that the patient's life would have been saved if only we could have got into the interior of the uterus so as to recognize and remove the cause of all the mischief, that I began to think more earnestly whether it might not be possible to do so in any similar case." In this way he was led to use the sponge tent for the first time in exploring the cavity of the womb.

On this subject, Dr. Marion Sims, referring to a case, remarks: "This case strongly illustrates the present important method of exploration; for here we could not have determined the cause of the uterine enlargement but by passing the finger into the cavity of the organ after dilatation of the cervix. Indeed, before the use of sponge tents, we could not by any possibility have diagnosed such a case as this. But now we determine with the minutest accuracy, not only the presence, but the size, position, relations and attachments of all such tumors."

Sir J. Y. Simpson, among other varieties of cancer of the uterus, in his lectures, gives a description, with drawings, of general cancerous ulceration, (which he declares to be the most common form of the disease of the interior of the uterus,) assailing the mucous membrane, ending in fatal rupture of the fundus, or assuming "the form of a sessile irregular excresence or fungus mass, projecting into and distending the uterine cavity, or even dilating and partially pressing through the healthy but distended os uteri." Illustrative of this variety of cancer, he gives the following case, and the means employed of ascertaining a correct diagnosis: He says: "The first time I ever saw and fairly made out the case of this last and most common form, was in a patient who had long suffered from an abundant serous and some-

times offensive discharge. She was here, from England, under the care of an old master of mine, and had often been treated by the application of caustics to the vagina and cervix, with the hope of arresting the copious and constant discharge. When consulted in regard to her case, I suggested the introduction of a sponge-tent into the os uteri, that we might then have an opportunity of making out more clearly the source of the discharge, or, at least, of making sure whether it might not be proceeding from the uterine cavity instead of the vaginal walls. After the sponge had been introduced the discharge was found to be checked, for the first time for many months, and on its withdrawal, a fungating mass was discovered by the finger in the interior of the uterus. You must not hold, therefore, that a patient has not got a cancer in the womb because the cervix is healthy; for the cervix may remain quite sound when the body of the organ has become extensively diseased."

The tent becomes of great use sometimes, in determining the existence of a vesico-uterine fistula when a vesico-vaginal fistula may be suspected. The same authority says: "In vesico-uterine fistulæ, in order to discover the perforation, you will generally require to plug the os uteri with a sponge tent. The use of the tent aids the diagnosis in two ways. First, by its pressure it prevents the escape of the urine per vaginam, thus proving the communication with the bladder to be placed higher than the os uteri. And, secondly, the due expansion of the os and cervix uteri, with tents, will enable you to reach the fistula with your finger or a sound, so as to empower you to trace the intercommunication between the urinary and uterine cavity."

The employment of tents affords the gynæcologist a therapeutical means of the greatest value in many diseases and conditions of the uterus. The power of the sponge tent to

destroy polypoid growths is now well-known. Dr. Sims, in his work on Uterine Surgery, claims—innocently, no doubt—the credit of originating the removal of tumors from the uterus by pressure from tents. Simpson has, however, precedence in this treatment. Dr. Sims had accidentally allowed a tent to remain in the uterus of a woman having a polypoid growth for eight days. His attention being called to the oversight, he removed it. Describing this case, he says: "When the tent was introduced a week before, the tumor was accurately measured, its volume, density and attachments all definitely settled, and easily so. . . . My surprise may be imagined when, on introducing the finger into the cavity of the uterus, after the removal of the tent, there was not a vestige of the tumor to be found."

Simpson, antedating this, had in his lectures said: "You must have understood, from what I have already told you, that, in a very large proportion of cases of polypus uteri—in all those cases, in fact, in which the polypus has not come fairly within our reach down into the vaginal cavity—a certain diagnosis of the case can only be made out after dilatation of the cervix uteri. If access to the root of the mischief be needed for satisfactory diagnosis, it is all the more necessary for surgical treatment; and what I wish you to understand at present is, that, in many cases where you are uncertain whether you have to do with an intra-uterine fibroid or a cervical mucous polypus, you can, by the introduction of a sponge tent, not only open up the way for an unmistakable recognition of the true nature of the mischief, but, at the same time, in the case of the soft cervical polypus, you crush and kill the growth by means of the expanding tent, and so rid the patient at once of her disease."

Dr. Sims affirms that "the tent may always be trusted to

destroy fungoid growths and small mucous or nabothian polypi when they cannot be otherwise removed."

He also remarks: "The power of the sponge tent to modify the uterine surfaces with which it lies in contact is truly wonderful. It dilates the neck of the womb; it softens it by pressure and by a sort of serous depletion; it reduces the size, not only of the neck, but of the body, of a moderately hypertrophied uterus; it destroys, not only fungoid granulations, but even large mucous polypi, and, in one instance, I saw a sponge tent destroy wholly a fibrous polypus as large as a pigeon's egg."

Now, while the idea of pressure for the removal of these conditions originated with Simpson, Sims has given force and authority to the practice. Pressure, as a means of effecting changes in the tissue of the uterus by other mechanical means than the tent has been employed.

To Dr. Sims is due the credit of using the tent as a stimulant to the diseased mucous membrane of the cervix and cavity when fungoid granulations are present. The tent can be used either medicated or without medication. Speaking of fungoid granulations, Dr. Sims remarks: "The curette is simply the adjuvant to the tent, and always to be preceded by it. But there are cases where their relationship is changed, the sponge becoming the adjuvant of the curette, and this is when the fungoid granulations are at the fundus uteri. Then the sponge is to dilate the cervix for the more easy application of the curette." "In cases of menorrhagia that resisted all treatment, Recamier passed his curette into the uterine cavity and raked it out as thoroughly as possible. This was before the days of sponge tents. But now we first dilate the cervix, pass the finger into the cavity, ascertain precisely the seat of the fungoid growths, pass

the curette by the side of the finger, and thus operate more understandingly."

In many cases of menorrhagia, tents employed as tampons, or for dilating the cervix, to more readily reach the seat of the trouble, by suitable remedial agents, become important factors in the treatment. The following case will be given:

CASE I.—Mrs. T., aged forty; married; has had no children. She has suffered from menorrhagia, for twelve or fifteen years. At various times, she has, from excessive hemorrhages, been brought to the brink of the grave. I was called to see her, during one of these severe losses of blood. For twelve months, the hemorrhage had increased, month after month, with each occurrence of the catamenial flow. She had exhausted every means at her command, and had passed through the hands of several physicians, with only temporary relief. I found her too feeble to assume the erect posture—with weak pulse and blanched skin. She had been confined to her bed for several weeks. Upon examination, the uterus was found to be heavy, cervix large, with patulous os. The sound passed into the uterine cavity, easily. The organ was slightly retroverted, and prolapsed. The blood flowed freely, filling the speculum rapidly. Removing the probe, the bleeding was arrested, by a temporary packing of cotton. After a few minutes, removing the packing, the os was brought in view. While waiting for the arrest of the flow, a corn-stalk tent, of large size, was trimmed, without being compressed, and, upon removing the cotton, carried into the uterine cavity. Pledgets of cotton, moistened with glycerine, were packed around the os, to prevent the escape of the tent. Twenty-four hours afterwards, the cotton packing and tent were removed. There had been no pain, of consequence, and no hemorrhage.

A second corn-stalk tent, compressed, in order to dilate the canal, was introduced, and retained by cotton, as before. The day following, the cotton and tent were taken away, and the canal found to be dilated the size of the little finger. A pledget of cotton, wrapped on a whalebone probe, soaked in concentrated nitric acid, was carried into, and swept aronud the cavity of, the uterus. The patient was left with the usual cotton packing. No hemorrhage, of consequence, occurred after this. The acid was applied, at intervals of a few days, on several subsequent occasions. She was placed upon tonics, and liberal supplies of food allowed. In a few weeks she had recovered sufficiently to attend to her domestic duties, and is now a hale, hearty woman, four years after the treatment.

For the cure of hypertrophy Dr. Sims reports Dr. Emmet as saying "that he has succeeded in doing more for general hypertrophy of the uterus by this means in a week than could be accomplished by any and all means in two or three months."

In obstructive dysmenorrhœa from fibroids, relief is had by dilating the cervical canal by tents. Dysmenorrhœa is often caused by a contraction of the cervical canal, at either the os internum or externum. The contraction occurs most commonly at the os externum. For the cure of dysmenorrhœa arising from either of these "mechanical anomalies" some method of dilatation must be employed, an operation undertaken or some kind of (vaginal or stem) pessary used. Authorities are arrayed on either side of dilatation by inscisions or of mechanical expansion of the strictured portions. When the contraction is found at the os externum, the bilateral operation will give satisfactory results in a large majority of cases. Much, however, can be accomplished in giving temporary relief, in these cases,

by the use of tents. The relief is seldom permanent. From this fact many gynæcologists condemn the use of tents, and either dilate by metallic bougies, forceably and rapidly, or resort to the bilateral operation. Forcible and rapid dilatation by metallic bougies, or expanding instruments, is too dangerous to secure general approbation. The bilateral operation is not always successful. Dr. Robert Barnes, an advocate of the operation, remarks: "The wished for result is not always immediate. In a certain number of cases, indeed, the next ensuing menstruation is perfectly easy and future immunity is attained. But not unfrequently, the first period or two after the operation are even more painful than before." * * * "Another objection specially urged by the advocates of dilatation by tents is, that the opening made by inscisions frequently contracts again, whereupon the object of the operation is frustrated. This contraction does sometimes take place. When it does, it is desirable to repeat the operation and to obviate the tendency to contraction by wearing a Wright's intra-uterine pessary for a day or two during the healing of the wound." Thus a stem-pessary becomes necessary. In these cases the use of the non-compressed corn-stalk tent, as a temporary intra-uterine pessary, occasionally inserted, will serve as good a purpose. It is light and non-irritating.

When the contraction occurs at the os internum, no careful surgeon would use the knife, or metrotome double or single. Forcible and rapid dilatation being too hazardous, dilatation must be accomplished by tents; and while no lasting results may be attained, yet the patient receives great temporary relief, and the uterus is prepared for intra-uterine support. These pessaries are the more demanded because the so-called contraction of the internal os is

the result, more frequently than otherwise, of versions or flexions of the organ. When retroversions or flexions exist, vaginal, instead of intra-uterine pessaries, will, in many cases, correct the trouble and permanently relieve the patient. Vaginal pessaries will not correct all cases of retroversions or flexions; and vaginal support will not often avail in anteversions or flexions. These conditions often demand intra-uterine support for their rectification and cure. Tents, in these cases, are to be used not so much to expand any portion of the canal as to bring the uterine axis in its normal direction, and accustom the membrane and the organ to the presence of a foreign substance, that they may ultimately tolerate the permanent stem pessary. In these cases the sponge or the sea-tangle tents could not be employed. Moreover, in versions and flexions, besides the dysmenorrhœa, the mucous membrane will be usually found in a state of chronic inflammation, and the medicated tent of non-compressed corn-stalk will be found a remedial measure of the greatest advantage. Illustrative of the use of tents in dysmenorrhœa, the following cases are given:

Case I.—Mrs. S., widow, aged thirty-seven years, one child fifteen years old, has suffered for many years with irregular and diminished flow, with great pain at menstrual periods. The pain has been, of late years, so great as to force her to bed, and has demanded powerful narcotics for relief at each period. She has been treated by several physicians for relief of pain, but no local treatment was ever attempted. She had almost despaired of relief. I was asked to take her case in hand. Upon examination, by touch, the womb was found a little tender to pressure and slightly flexed backward. The speculum revealed a very small os, with a conical cervix. The probe passed with some difficulty and gave considerable pain. A moderately compressed corn-

stalk tent was prepared. It was made small and about one and one-half inches in length, so as merely to pass through the internal os, and that the larger extremity of the tent might be carried within the grasp of the external os. Pledgets of cotton, moistened with glycerine, were packed around the os. This treatment was had six days after the last menstrual period. It was followed up, at intervals of from four to six days, to within a few days of the next menstrual period.

The tents were gradually increased in size, but not in length, and were permitted to remain eight to twelve or fifteen hours, as they could be well borne. She was instructed, upon the appearance of pain, to withdraw the cotton (by the attached strings) and the tent. The patient (or nurse) removed all the tents. Cotton pessaries (tampons), moistened with glycerine were to be worn daily during intervals of treatment. At the next menstrual period, the flow was almost natural in quantity, and, after the first few hours, free from pain. The treatment was followed up in the same way one month longer. The relief was so great that the patient asserted she had never been so free of pain during her menstrual life. It was so great she declined further treatment, though urged to submit to bilateral incision of the cervix for a permanent cure. Three years have passed. She still feels the benefit of the treatment, and, while not well, asserts, because of the relief given, that she is cured.

Case III.—Dysmenorrhœa, cervical endometritis, with retroversion. Mrs. A, aged twenty-four; married five years; childless; thinks she miscarried (?) three years ago. Has suffered with dysmenorrhœa for several years, which has greatly increased in the last few years. I was called to see her two weeks before an expected period. She had lost flesh; had indigestion, and was constipated; complained of aching in the back, and troubled at times with dysuria; had more or

less leucorrhœa during inter-menstral periods. To the touch a velvety condition of the os was discovered, and the organ found retroverted. The probe passed with difficulty at the internal os, giving considerable pain, with slight oozing of blood. The os was small, and lips red from loss of epithelium, with a tenacious mucous discharge from the cervical canal. A corn-stalk tent, small, moderately compressed, curved, and one and a half inches in length, was introduced. Its introduction caused pain, but by gentle and steady pressure it was carried through the internal os. She was told to allow the tent to remain as long as it could be borne without great pain. I called on the lady eight hours after its introduction, and found her suffering considerable pain. She had determined to bear more than I was willing she should. She believed a speedy cure depended upon "opening the womb." I removed the tent, administered an anodyne, and recommended rest for a few days. During this time she was to use large quantities of hot water several times a day, and after washing, to throw up the vagina one syringe-full of solution of chlorate potassium, and retain it for some time. A prescription was also given for the indigestion and constipated bowels. A few days after the cessation of pain, another tent, with a little more compression, was used. It was removed in a few hours, and the treatment, as above, continued. At the next treatment the tent was compressed but slightly; was saturated with tinctrue of iodine and retained twelve or fifteen hours. Stopping only for the menstrual periods to pass, tents, at suitable intervals, of increased size and degrees of compression, sometimes medicated, were inintroduced. The probe passed without pain. Cotton pessaries were worn, so that, after the lapse of a few months, all tenderness being removed, a Fitch improved (Hodge-

Smith) pessary was adjusted, and the patient relieved of all trouble.

Tents of the proper length and size, either with medicated liquids or free of liquids, are of great service in the treatment of chronic cervical endometritis. Dr. Thomas, in giving his treatment of the disease, says: "The efforts of the practitioner should be directed to producing an alterative influence upon a mucous membrane, which is in a condition of chronic inflammation, and the avoidance of all influences, which may cause it to spread to adjacent tissues. These ends will be best accomplished by the following means: General regimen; emolient applications; alterative applications; oblation or destruction of diseased glands." He does not include the use of the tent in the catalogue of alterative applications, but recommends them alone, for dilating the contracted external os. Simpson, Barnes and Sims, are all silent on the subject. I have been in the habit, for many years, of giving the necessary alterative action to the diseased mucous membrane by the use of the corn-stalk tent. It may be slightly compressed, or not at all. If only moderate stimulation is desired, it is introduced with a few drops of glycerine, rubbed on it. If destruction of the glands is wished, the tent can be saturated with any desired solution, and introduced, where it may be allowed to remain for a few minntes, several hours, or even for a few days. The only approach Dr. Thomas makes to this method of treatment is, that recommended by Dr. Sims, which consists of depositing a small roll of cotton, medicated, in the cervical canal.

In treating chronic endometritis these authors are silent upon the employment of tents other than as dilators. Dr. Sims alludes to dilating the internal os by sponge tents preparatory to intra-uterine injections. In this connection he remarks: "It must not be forgotten that the uterine injec-

tion is to be always and invariably preceded by the use of the sponge tent; that this is an essential part of the treatment, and by no means to be neglected." He asserts that after dilating the internal os by the sponge tent these injections are "simple and safe." Many gynæcologists do not share this confidence in the harmlessness of intra-uterine injections. With medicated tents and other safer modes of treatment, just as effectual, if not more so, at hand, few will venture to run the risks of incurring the accidents frequently following intra-uterine injections.

For the treatment of this disease the non-compressed pith of the corn-stalk, employed as a tent, is an admirable means of conveying medicines to the cavity of the womb. The cloth tents of Dr. Taliaferro are also good tents for this purpose. They are inferior to the corn-stalk tent in several particulars. They are liable to bend and are sometimes quite difficult of introduction when saturated with a fluid. A spasmodic contraction of the cervical canal always takes place when a stimulating application comes in contact with the mucous membrane. Under these circumstances the canal partially closes, and when the cloth tent is attempted to be introduced, it frequently bends before it can overcome the resistance. The corn-stalk tent is of easy introduction. Its rigidity overcomes any slight resistance. It absorbs fluids readily and does not bend, if of proper size, before entering the cervical canal. It is sometimes desirable to secure a limited degree of pressure upon the mucous membrane of the uterine canal. The cloth tent cannot be, to any considerable extent, a dilator. Its dilatation occurs before its introduction if medicated. It may slightly expand in the uterine cavity if introduced dry, but being soft, cannot accomplish much in that way. For seven years I have been using the corn-stalk tent in the treatment of

chronic endometritis. I do not employ tents to the exclusion of other methods of intra-uterine treatment; nor do I always medicate the tent. The corn-stalk tent alone, without medication, frequently affords the necessary amount of alterative action in the diseased membranes. Local treatment is not all the treatment necessary. There must be constitutional treatment as well.

CASE IV.—Chronic Endometritis, with Retroversion. Mrs. C., aged twenty-eight; married; mother of three children, the youngest four years old. Since the birth of this child, she has been troubled with leucorrhœa, copious and almost purulent at times. Pain in the back. Menstruates irregularly in time and quantity, and sometimes attended with pain. Tongue coated white. Pulse 90. Rests badly at night. Bowels constipated. Has lost flesh and appetite. Coughs, and thinks she is "consumptive." Has bronchitis. Found uterus, by touch, retroverted; os large, indented and velvety. Great relaxation of parts, with copious, thick, muco-purulent discharge filling the vaginal *cul-de-sac.* The speculum revealed the cervix large, ragged and "ulcerated;" the redness extending up as far as visible, with thick, cream-colored, muco-purulent secretion pouring from it when pressed. Probe caused some pain; passed without much difficulty, following the retroverted cavity. The uterus was rotated into position by the probe, and a corn-stalk tent, slightly compressed, and saturated with tincture of iodine, carried into the uterus. The patient was requested to keep her bed and allow the tent to remain twelve or more hours, unless pain supervened, when it should be withdrawn. It was removed the next day. On my next visit, five days afterwards, I found the discharge had diminished. A tent was introduced as before. This treatment, varied to suit the conditions of the patient, was followed up at intervals of

four to six or more days. Between intervals of treatment she was to use copious warm water injections, followed by injections of solution of chlorate of potassium and tannin. Cotton pessaries, as large as could be borne, moistened with glycerine, were to be inserted each morning and worn during the day. Prescriptions were made to correct the indigestion and constipation. She was ordered phosphated cod liver oil and bromide of potassium for promoting sleep at night.

The treatment was continued for many months. Improvement was slow, but quite perceptible from the beginning. When the improvement had progressed sufficiently, treatment was had at longer intervals of time, and the cotton pessaries displaced by a well-fitted (Hodge-Smith) Fitch pessary. At this time, fifteen months after commencement of treatment, the patient is in excellent health and three months advanced in pregnancy. She still wears the pessary, which will be removed in a few weeks.

Other uterine troubles are amenable to treatment by tents. In amenorrhœa, among other methods of treatment, Dr. Thomas recommends the introduction of a tent a few days before the expected period. He also recommends its use in neuralgic dysmenorrhœa.

The attention of the profession has been repeatedly called to the dangerous consequences often following the use of uterine tents. Metritis, peritonitis, septicæmic fever, tetanus, hysterical convulsions, etc., have all followed the use of the sponge tent. There are many serious objections to the sponge tent. The secretions are absorbed and retained, and are often decomposed in it while in contact with the mucous membrane. In expanding, the cells of the membrane are sunk in it, and on its withdrawal are torn and denuded, aiding the absorption of septic fluids.

The sea-tangle tent has been used as a substitute. Simi-

lar accidents have, however, followed its employment. Of these tents, Dr. Sims writes: "I have used the laminaria digitata, and think well of them, but they can never wholly replace the sponge tent." It is possible that no tent can entirely replace the sponge tent, but the effort, in view of the dangers of that tent, must be constantly made. Dr. Thomas remarks: "Had all the fatal cases which have resulted from accidents due to tents been faithfully recorded, the list would now be a long one, and it would be greatly lengthened by a record of all the instances in which tedious, exhausting and dangerous disease has thus been excited." He gives the following rules for the use of tents. These rules are well known to the profession, but I give them because, in some respects, they do not apply to the corn-stalk tent, however much they may to the sponge tent:

"*Rule* 1. In the introduction of a tent, no force whatever should be employed. Should that first essayed not pass the os internum easily, it should be withdrawn and either bent so as to follow more accurately the course of the cervical canal, as ascertained by the probe, or exchanged for a smaller tent."

The observations in this rule give the experience of gynæcologists in the use of the sponge tent. The compressed sponge is exceedingly hard and wanting in pliability. No force should be used in its introduction. The corn-stalk tent is less irritating to the mucous membrane, and, made smooth, can be passed with a moderate degree of force. I have often employed a considerable amount of force, in certain cases, in its introduction. The probe should always precede the introduction of the tent, in order to show the degree of curvature in the cervical canal, and to determine the size and length of the tent suited to the particular case. If curvature beyond that naturally existing occurs, it is easy,

in a few minutes, to shape the curvature of the tent to that of the organ, by selecting a piece of the pith in which the curve has been given it by nature in its growth. From this fact the fibres of the stalk are not cut across, but preserved in their natural direction. A tent made in this way may be introduced without difficulty. I have prepared these tents often after the introduction of the speculum and the probe, in a few minutes, after determining the size, curve, and length demanded by the particular case.

Rule 2.—" A tent should never, under any circumstances, be introduced at the physician's office, and the patient allowed to go home with it in utero. Such practice is hazardous in the extreme. Even when introduced at the patient's home, she should, at once, be confined to the recumbent posture, and kept perfectly quiet."

This rule applies to any tent used for the purpose of dilatation; and, while caution, in the use of tents, is always to be enjoined, it is nevertheless true, that the corn-stalk tent used without compression, can be worn without danger.

After its introduction, I request the patient to keep the recumbent position for a few hours. But, often, they attend to their usual employments. They are directed, if the tent gives pain, to withdraw it, by the string attached. I will say here, that I rarely ever withdraw a medicated or non-compressed tent myself, but ask the patient to do so, after being properly instructed as to the manner of bringing it away. I tell her to pull gently, with a see-saw motion, and in the proper direction, and to use no undue amount of force. If it refuses to come away easily, I remove it.

Rule 3.—" The practitioner should always investigate as to the previous existence of chronic pelvic peritonitis, one of the most common of the diseases of women. Should it have existed, tents should be carefully avoided. In some of the

instances, in which I have seen dangerous results follow their use, this condition had previously existed, and been excited into action again by them."

Rule 4.—"A tent should never be allowed to remain in the uterus more than twenty-four hours, and, if it be compatible with the accomplishment of the desired result, it should be removed in twelve hours."

This rule applies again to the use of the sponge tent. I have often intentionally allowed the corn-stalk non-compressed tent to remain in the uterus for several days. I have never had any bad results from the practice, but it is well to state, I always instruct the patient to withdraw it at once upon the appearance of pain. It can be borne for a length of time, provided pain does not supervene.

Rule 5.—"After the removal of a tent, the vagina should be washed out with an antiseptic fluid, and if any pain, chilling or discomfort, follow the removal, opium should be freely administered and perfect rest enjoined."

The use of antiseptic fluids after the removal of the corn-stalk tent is unnecessary, as no decomposition occurs because of its presence in the cervical canal. It has never been necessary to use opium for the purposes above suggested after the withdrawal of these tents.

Rule 6.—"After the removal of the tent the patient should be kept in bed at least twenty-four hours, and never allowed to travel before the expiration of four or five days."

The first part of this rule I have never observed in a single instance, when using the tent medicated. When employing the corn stalk tent as a dilator, it is better to observe the rule, but it is not necessary to do so when using it non-compressed or as a medicated application.

In speaking of sponge tents Dr. Sims declares he never

uses them if he can possibly avoid doing so.* Indeed, so dangerous does he regard them, and so necessaay, if possible, is it to find a substitute for them that he asserts that "he who will give us an efficient, safe and cheap substitute for sponge tents will confer a great boon upon surgery."

I offer the corn-stalk tent as a "safe and cheap substitute." It remains to be seen if it shall, in the hands of the the profession, prove "efficient." As before stated, I have used this tent for the last seven years, testing it before giving it to the profession. During this time I have not had a single accident from its use and have introduced it many hundreds of times.

Its advantages I will enumerate as follows:

It dilates effectually, but not too rapidly.

It is smooth, soft, and can be removed without force.

It produces no lacerations, abrasions, or irritation of the mucous membrane.

It can be medicated with any substance, as easily as the sponge or cloth tent.

It is of vegetable origin, and, hence, does not become putrid and poisonous to the patient.

It may be retained, non-compressed, for days, without injurious results, if no pain occurs.

A number of small tents, filling up the cervical canal, may be used for more rapid expansion.

It can be prepared in a few minutes, of any desired curve, size and length.

Any degree of compression may be given it, or it may be used without compression.

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*The dangerous character of the sponge, when used as a tent, is easily explained. When taken from the sea it is "a black, gelatinous mass, emitting a very disagreeable odor, which increases as the mass putrefies. These black masses forming the sponges are taken ashore where they are either buried in the sand or exposed to the sun for several days; after decomposition has ceased, the sponges are beaten with clubs, this beating removing many of the dead animals in the form of black dust."

It may be perforated, like the sea-tangle, and its power of absorption increased, by pricking its surface.

The introduction of the corn-stalk tent is, usually, no difficult matter. I introduce it before or after inserting the speculum, but prefer the latter method, as a rule. After bringing the os into view, by means of the speculum (which can easily be done, except in cases of anteversion, when the tenaculum will aid in bringing it in view,) the tent is carried to the os uteri, affixed to a stick eight or ten inches in length, by means of a needle fixed in the end of the stick. Holding the small end of the tent in the os, the uterine probe, or a small rod, is placed firmly upon the tent, near the point of insertion of the needle. The stick, in which the needle is fixed, is withdrawn, and the tent pushed, gently but firmly, up the cervical canal by the probe. Between the end of the tent and the probe, the latter being held firmly against the tent, a kind of universal joint is formed, permitting the tent to take the surest and easiest direction into the uterus. Frequently, the uterus ascends before the tent (especially if a little too large), as it is being pressed into the cervical canal; and, in straightening the canal, where there exist curvatures from flexions or versions, the probe end of the tent falls back upon the posterior wall of the vagina. The speculum is withdrawn an inch or so, while the probe, with the tent almost at a right angle with it, lifts the tent into the cervical canal, out of sight, where it is left, a string having been attached to it, by which it may be withdrawn. I endeavor, always, to carry the large end (probe end) of the tent a short distance within the os uteri. When this is done, it is less liable to escape from the canal into the vagina. The size of the tent should always admit of easy introduction. Slight force will, however, do no harm. It is well to place a packing of cotton, with glyce-

rine, around and upon the os uteri, before removing the speculum.

As stated, I allow the patient to withdraw the tent, when not used as a dilator. The physician, in removing the tent, should do so with the fingers, and never through the speculum, as air may be admitted to the uterine cavity, and bad results follow.

REPORT OF THE SECTION ON SURGERY FOR THE THIRD CONGRESSIONAL DISTRICT.

BY A. A. SMITH, M D., HAWKINSVILLE.

INCISED WOUND OF THE ABDOMEN.

On the night of the 16th of February, 1878, George Thompson, a negro man, was brought to my office, suffering from a wound of the abdomen, which he received that afternoon about three o'clock. After making careful inquiries, and examining the wound, I learned that in a personal rencounter he had been cut with a knife. The wound was about one inch in length, and situated two inches below the umbilicus, and about three inches to the right of the median line. From the opening there was a loop of intestines, ten or twelve inches in length, protruding. I at once administered one quarter of a grain of morphine, hypodermically, and commenced an attempt at reduction. This I soon found I could not do, owing to the gaseous distension of the protruded bowel, which at that time (five hours after the injury had been received) was so great that it precluded all possibility of reduction by that mode of procedure. It was now clearly apparent that I had to puncture the bowel and allow the escape of the accumulated gas or enlarge the opening. The latter I thought safest, as there was little or no danger of hemorrhage. I introduced my finger into the opening, deep down into the cavity of the abdomen, and

with a probe-pointed bistoury (using the finger as a guide) made the opening about one inch larger, after which I reduced the protruded bowel with little difficulty, taking care to return that portion first which descended last. I then closed the wound accurately with the interrupted sutures, including the entire thickness of the abdominal wall, except the peritoneum. The patient was conveyed to his home, and ordered to be kept in the recumbent posture, with opiates to relieve pain, and, as a local application, a solution of carbolic acid was used for several days. On the fifth day the sutures were removed, and healing commenced by second intention. On the tenth day from date of injury, a hard and firm cicatrix had formed, and the patient was dismissed, well and able to resume his duties.

HEMORRHOIDS.

Case 1.—*Treated with Ligature.*—In the latter part of May, 1877, J. C., aged about forty-five years, called to see me, complaining of severe pain in the lower part of the abdomen, with a feeling of weight and burning in the rectum. I gave him an anodyne, and relief soon followed. I heard nothing of the case until two weeks afterwards, when I was requested to visit him immediately, as he was suffering intensely with his bowels. On my arrival I found him restless and anxious to be relieved. I at once used morphine, hypodermically, which soon quieted him. I then made a careful examination, and found the cause of his trouble to be hemorrhoids. There were three tumors partially protruding through the sphincter anii. They were of a dark red color, and quite sensitive to the touch, being considerably inflamed. The patient stated that he had been troubled with them for fifteen years, and at times so much so as to incapacitate him from his business.

He had taken various kinds of medicine and used many remedies, none of which gave any decided relief.

I advised him to have the tumors removed. He at first objected, as he had been told that an operation would endanger his life; but, convincing him that extirpation was the only sure cure, he consented, and, on the following day, I, with the assistance of Dr. A. R. Taylor, performed the operation, having previously cleared out the bowels with a dose of castor oil. I requested the patient to sit over a tub of warm water and strain forcibly, so as to bring the tumors into view; and having him placed on his left side, with the knees drawn up, I, by the use of the tenaculum, succeeded in bringing the tumors down, (the largest being about the size of a hen's egg,) and then with a needle armed with a double thread, I pierced the base of the largest tumor, and, after cutting the thread, I tied either half separately, and then snipped off its apex. The others being smaller, I tied them firmly around their base, and having oiled them well with the carbolate of glycerine, returned them into the rectum. I did not clip the ligatures, but left them hanging from the anus, in order to accurately ascertain the time and difference in the sloughing of the tumors. The threads of the two smaller ones came away in seventy-two hours, while that of the large one did not come away until the seventh day. The after-treatment was as usual in such cases—opiates to restrain the bowels, with quinine to lessen febrile excitement. The patient was up on the eighth day, having had no unfavorable symptoms during his illness. In three weeks afterwards he was able to resume his duties.

Case 2.—*Treated with Nitric Acid.*—Mrs. R., aged thirty-eight years, the mother of two children, consulted me on the 8th of May, 1877, relative—as she imagined—to a uterine trouble. She said that during her first ges-

tation she had considerable trouble, with pain and frequent inclination to void urine prior to and immediately after parturition. She had consulted her family physician, and he gave her some simple remedies, her troubles passed away, and she felt nothing more of them until a few weeks before her second confinement, when the old trouble came on worse than before, and she suffered with pain in the sacral region for several weeks after the birth of the child. She again consulted a physician, who told her she had "falling of the womb," and treated her case by astringent injections and simple tonics. A few years afterwards, she traveled through the Northern States, and, during the time, had several physicians to see her, all of whom, without any examination (she not consenting), pronounced her case as one of womb disease.

When I first saw her, and hearing her full statements, I insisted on an examination, to which she consented. I found a free discharge from the vagina, but the womb was healthy, and no displacement, whatever, existed. On making a digital examination per rectum, I found two little varicose tumors with the cellular tissue around very much thickened and indurated. The tumors were very sensitive and excessively vascular, bleeding from the slightest touch. At times, when the bowels were moved by cathartics, the hemorrhage was so great as to cause her to think that it was the menstrual flow. The treatment pursued, was strong undiluted nitric acid, and injections of diluted glycerine, and nervines with tonics. I made only three applications of the acid, at intervals of eight days. There was improvement from the first application, and after the third she was perfectly cured of all pain, and of the leucorrhœal discharge. She has gained in flesh rapidly since. I report these two cases in order to compare the different modes of treatment used and their relative value, and hoping thereby to obtain the opinions of members of the Association upon this subject.

REPORT OF THE SECTION ON SURGERY FOR THE FIFTH CONGRESSIONAL DISTRICT.

BY JOHN THAD. JOHNSON, M.D., ATLANTA,
Professor of Anatomy and Lecturer on Venereal Diseases, in the Atlanta Medical College.

PERI-TYPHLITIC ABSCESS.

The patient was a man, aged fifty-five years. He was, at first, under the care of Dr. C. Pinckney, of this city. Dr. P. and I were afterward associated in the management of the case. With his consent, the case is here presented.

The patient had been unwell for some days before taking his bed. There was alteration of constipation and diarrhœa, with some uneasiness in the right iliac fossa. There then supervened slight fever. The symptoms increasing, he took his bed. Tenderness over the fossa became marked. The leg was now kept constantly flexed upon the thigh, and the thigh upon the abdomen. By deep pressure, an indistinct tumor could be detected. The patient became weaker, emaciated, lost all appetite, tongue became very dry; in short, his fever finally assumed a typhoid form. The condition of his bowels was still variable. We diagnosed abscess in the fossa, surrounding the cæcum, and probably communicating with it.

We now, in order that we might confirm our diagnosis, improvised an aspirator on a small scale, by attaching a needle (similar to, but larger than, the ordinary hypodermic

needle) to a small hard-rubber syringe, by the intervention of rubber tubing. Passing the needle to the depth of nearly two inches, no pus was reached. We then thrust it full three inches, and drew out a small quantity of extremely offensive pus. An incision, one and a half inches in length, was then made (Dr. Pinckney operating) through the abdominal walls, and a smaller cut continued down into the abscess. Several ounces of ill-conditioned pus escaped on this occasion. No anæsthetic was used. Two or three hours afterward, the patient suffered from shock, for the relief of which energetic measures were required. A tent was kept in the wound, and removed once or twice each day to allow the flow of pus. This was further promoted by the introduction of a large syringe into the cavity of the abscess. Our patient did reasonably well for several days. Pus flowed very freely for more than a week. His general condition had somewhat improved, and we were entertaining hope for his recovery, when symptoms of pyæmia were ushered in with chills, and he died within about three days. An autopsy was not obtained. No foreign body was detected in the discharge, but may have remained in the abscess. We thought at times that the odor from the discharge was distinctly fæcal.

The case is reported because of its comparative infrequency, and the especial attention which has been of late directed to abscesses in the neighborhood of the cæcum.

RETENTION OF URINE FROM AN UNUSUAL FORM OF STRICTURE.

I was called to operate on Mr. ——, of ——— county, for retention of urine. I expected to find an ordinary stricture, the result of some previous inflammation within the canal. No special examination had been made by the attending physician, because of not having all the instruments

which might become necessary in the course of an operation for the relief of the patient.

In the attempt to introduce a small bougie, it was discovered that a firm adhesion existed between the glans and prepuce. Only the extremity of the glans, comprising an area about one-third of an inch in diameter, could be uncovered. The prepuce had adhered in such a manner as to obliterate the entire meatus except a minute opening at the upper commissure, which would only, and with difficulty, admit the smallest filiform bougie. Our supposition was, that the meatus was of normal size in very early life, but had become involved in the adhesion that afterward occurred.

The filiform bougie, as stated above, could be passed within the meatus, but I did not succeed in introducing it to a greater depth than three-fourths of an inch. Below this point, for some distance, the canal was almost entirely obliterated. The patient had passed urine only by drops for many months.

I made a canal by thrusting, very carefully, a slender bistoury downward toward the bladder. With the finger of my left hand I could feel the blade within the corpus spongiosum, and used this as a guide. After each advance of the blade to the extent of a few lines, I would carefully search, with several filiforms in the canal at the same time, for the remains of the urethra. At the depth of two inches a bougie passed into the canal and on to the bladder. There was no tight constriction below the point indicated; and, with some aid from my urethrotome, I had no difficulty in introducing No. 34, of French scale, to the bladder.

The adhesion between prepuce and glans was very firm. Both were cemented into one solid body. No trace of the original separation was discovered by dissection.

No extensive dissection was undertaken to loose the adhe-

sions, as it was deemed best, for several reasons, to postpone this to another time. The patient, though, having made a good recovery of his stricture, is so satisfied with his condition as to be unwilling to submit, as yet, to further interference. He has since married: he had previously lived a bachelor.

The interesting points in the above case are, 1st The long-standing adhesion, as it seems to have been formed in early boyhood; 2d. The manner in which the meatus was nearly closed. I believe the narrowing of the canal in the anterior two inches, amounting almost to obliteration, was subsequent to, and consequent upon, the obstruction of the meatus.

There can be no doubt but that had this patient been relieved in early life of the adhesion, he would have escaped much subsequent trouble. There had been, for many years, much difficulty in urinating. In earlier years, if I remember correctly, he had been afflicted with "gravel" (so-called). I questioned him in regard to the seminal function, but failed to elicit satisfactory information.

The case is reported, not because strictures or retention of urine are of rare or peculiar interest, but as showing the serious results which may follow a slight lesion of early life.

I am indebted to Dr. J. L. Hamilton, of Stone Mountain, for valuable assistance in the operation, and for careful attention in conducting the after treatment.

WHAT IS THE TRUE VALUE OF CAUSTICS IN THE TREATMENT OF VENEREAL ULCERS?

It has been fashionable, from time almost immemorial, to attack with some caustic, supposed to be destructive, all ulcers of the genital organs which were known, or even suspected to be, venereal in character.

These remedies are still in vogue. The caustic is sometimes applied with a proper and full understanding of a defi-

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These remedies are still in vogue. The caustic is sometimes applied with a proper and full understanding of a defi-

nite purpose that may be accomplished. It very frequently is applied from a mistaken indication, and a mistaken idea of its power to meet that indication. It is applied, often, because the patient wishes his infirmity "burnt out," and the doctor yields to his wish. It is applied, often, because it gives the appearance of doing something very earnest and very active, and nothing else seems to fill these indications so perfectly. Most often of all, it is used because there is no conception of the pathology of the disease for which its aid is invoked.

It cannot be denied that any remedy which is potent for evil should never be used unless there is a definite indication to be met, and a reasonable probability that the remedy in question will meet it.

It may be appropriately asked here, is there any serious injury to result from a caustic, even if needlessly applied? I do not claim that it will work any injury to life or limb. It may increase the amount of inflammation already present, protract the disease if injudiciously used, and phimosis or paraphimosis is very frequently one of its results. If used early, it often renders a diagnosis obscure or impossible to make. It subjects the patient to useless pain. If its effects are over-estimated, it may lure the physician into a disregard of other local or constitutional treatment. Finally, if cause and effect are not properly weighed, it serves to confer reputation undeserved upon a remedy, and to confuse therapeutical resources.

On the other hand, we should remember that there is a venereal disease so terrible in its effects, not alone on the victim first involved, but on those innocent of his crimes, that we would be justified in resorting, not only to a comparatively slight destruction of tissue, but even to amputation of organs, if thereby we could avert future calamities.

For convenience of argument, let us consider an imaginary case, such as is met daily in practice: A patient presents himself with an abrasion upon his penis; it is cauterized; that which was a simple lesion becomes an ulcer, and often is again and again treated by the same remedy, until that which was altogether insignificant has become apparently of consequence; the diagnosis obscured; the patient harassed with unnecessary tortures of apprehension, and subjected, often, to injurious constitutional treatment.

Is it not better, in this case, that more rational means were employed, until there is a positive indication for such application?

But a more common example, and one which requires an understanding of the nature of the two diseases discussed, is this: an ulcer is to be treated which is decided to be specific; is it a local venereal ulcer, or is it constitutional in character (syphilis)? Shall we cauterize? What can we gain thereby? or what damage may we do? Can we secure a more speedy cure? May complications be thereby either invited or averted? Or, finally, can we cut short a disease that would otherwise prove constitutional, and restrain it within its local bounds (this being the all-important consideration).

Before proceeding to answer the questions just offered, I here remind the reader that a local venereal ulcer remains always local. It is inherent in the virus. No vice nor defect of constitution can secure or repel its invasion of the system; neither treatment or neglect of treatment, whether local or constitutional, can alter its pathology or change its nature.

Further, a constitutional sore (true syphilis) is from the first—from the moment of its inoculation, and always must remain—constitutional. As in the local sore, neither time

nor season, nor strength nor weakness, neither treatment nor neglect of treatment, can rob a blood-disease of its character and convert it into a local affection.

It is not the object of this paper to discuss "unity" or "duality." I might raise page upon page in argument; but I merely state, as above, a fact which no scientific man of this day can deny, unless prejudice has blinded him, or early habit and teachings, which cannot be eradicated, have incapacitated him for careful observation.

Unless the distinction between syphilis and diseases non-syphilitic be fully made, I do not see how there can be satisfactory or rational treatment of the affections in question. For, in such instance, either there must be violent treatment for an insignificant affection, or inefficient treatment for one terribly serious.

I am ready to admit that there are circumstances or facts bearing upon the two diseases which need further investigation. Experiments or observations have been made which afford room for speculation as to some remote kinship or interchangeability between the local and the constitutional virus. But this weighs as nothing against the positive and overwhelming proofs of each of the two diseases being always propagated in kind, and maintaining its peculiar character from inoculation to recovery.

But to return to our patient: If we can diagnose the sore as local, we use nothing with a view of preventing infection of the system. No caustic is necessary *for this purpose.* If the ulcer has but recently appeared, its destruction is justifiable in order that we may, if possible, destroy its specific character. By thus destroying it, and substituting a simple ulcer, the cure *may* be hastened, and the risk of complications lessened. We *may* thus prevent the formation of a virulent, suppurating bubo. These are the proper

and legitimate objects to be sought by the destruction of a bubo. One thorough cauterization should accomplish the object; and it should not be repeated merely because it is a venereal sore we are treating. The lesion should then be treated as any small simple ulcer. If it become indolent, astringents, or a light touching with nitrate of silver, will hasten the cure.

When we once decide to use the caustic, our work should be made thorough. Patients should object to the use of the hot iron; but we may select some very efficient articles. Nitric acid answers well. Nitrate of silver is more painful, produces higher inflammation, and is less thorough in action.

We may use caustics then, as above, in the treatment of the local sore (chancroid). Reason and high authority endorse it. But I am sure, that in my own practice, the many cases that I have treated without the use of any caustic whatever, have been as free from complications, and have recovered as quickly, as those subjected to the more violent measures.

Should phagedæna attack the ulcer, nitric acid should be applied to every portion of the surface; but this is the treatment of phagedæna, not of chancroid.

Suppose we find the sore a constitutional one, shall we use caustics? Certainly not. Destruction of this primary manifestation of a blood-disease, has no effect upon the course, severity, or duration, of that disease, beyond the present lesion. This sore is not a violent one locally; there is but little risk of local complications. Irritation with caustic would only increase that risk. Constitutional treatment will cure the sore. If it should become very indolent or sluggish, its surface may be dressed with an astringent, or stimulated—not cauterized—with nitrate of silver.

Of the various applications I do not propose here to speak; the object of this paper being the indications for destruction of a venereal sore.

In some instances, even after a careful study of the ulcer, and that, too, with a knowledge of the nature, history, and symptoms of the local and the constitutional affection, we are unable to form a positive diagnosis. In that instance we should use mild applications until time and further development have enabled us to arrive at a conclusion. We risk nothing by the delay. Hasty action may still further obscure our diagnosis. The patient might thereby be subjected to unnecessary and injurious medication, or deprived of treatment absolutely essential.

I will insert here a few remarks upon the uselessness of cauterizing a syphilitic chancre. In several recorded instances, accurately observed, the point of inoculation (an abrasion) was destroyed by caustic within an hour of contact. The abrasion healed promptly; but, in due time (from fourteen to twenty-three days) the chancre appeared, followed by the other usual manifestations of syphilis. The same experience has been obtained in intentional inoculation with syphilis. If destruction of the locality, almost immediately after inoculation, avails nothing, how useless the destruction of the chancre (the primary lesion of the disease), many days after contagion! A similar experiment has been made on the point inoculated with vaccine virus. Destruction of the spot with caustic, a few moments afterward, did not interfere with the regular development of the vaccine disease.

In this connection, I beg to call attention to a most interesting and elaborate article, in the January number of the American Journal of the Medical Sciences, entitled "Tattooing as a means of communicating syphilis", by Drs. F.

F. Maury and C. W. Dulles. A professional tattooer, the subject of syphilitic mucous patches on the lips, communicated the disease to fifteen persons, by means of the needles with which he made the punctures of the skin, he frequently moistening the needles in his mouth before dipping them into the pigments. These cases have no bearing, it is true, upon the length of time required for the absorption of the poison; but they do afford much interest in the further proof of the disease always producing its kind; and, hence, may be appropriately referred to.

CONCLUSIONS.

1. We should not use caustics, except to fill a specific indication. This indication must be obtained from a knowledge of the nature of the sore under treatment. Our diagnosis must, therefore be clear.

2. Failure to cauterize a chancroid (local sore) does not entail syphilis. Cauterization of such a sore does not prevent it. Such a sore does not involve syphilis, any more than it does cancer or typhoid fever.

3. Destruction of a chancroid at a very early stage may, possibly, prevent a *virulent*, suppurating bubo. It often precipitates phimosis, or paraphimosis. It may so irritate the sore as to produce a simple inflammatory (sympathetic) bubo.

4. Chancroid heals readily, without the use of caustics.

5. Destruction of a chancre (syhpilitic) does not avert syphilis. The disease is already present. The sore is syphilis itself.

6. The syphilitic sore heals readily under constitutional medication and mild local applications.

CASE OF GUNSHOT WOUND OF THE HEAD, IN WHICH THE BALL REMAINED SIX YEARS, WITHOUT SYMPTOM, IN THE BRAIN.

BY S. H. GRAY, M.D., FORSYTH.

In the fall of 1871, a negro boy, aged eighteen, called on me to extract a pistol ball from his head. The wound was received twelve hours before. The patient had ridden horseback three miles. An examination discovered that the ball had passed through the frontal bone, over the right eye, and into the substance of the brain. Probing failed to find the ball. The search was not very thorough, however, for fear of doing injury. There was no pain nor other sensation attending it; had not been unconscious. Cold water applications were ordered applied to the head; large doses of bromide of potash were given. Rest in bed was enjoined, but the patient failed to regard the injunction. He quit work for a day or two, however. In a few days the wound had healed, and the boy was again at work in the farm.

In the fall of 1877, this same boy received a cut in the arm. The radial artery was severed, and he died from hemorrhage. I made an autopsy, at request of the coroner. I then obtained permission of the family to examine the skull and brain. I found the ball imbedded in healthy brain, surrounded by a very small quantity of slightly yellow fluid. The ball was covered (but not enveloped) by a small portion of dura mater. This sac, or process, of membrane was also attached to the bone at the point of entrance of the ball. The sac was pulled away, but the ball remained in place.

The patient was under my supervision from 1871 to 1877, and, during that time, never suffered from headache or other unpleasant symptom.

I present herewith a portion of the frontal bone, the ball, and the sac in which it rested.

CASE OF ADHERENT PREPUCE, CONGENITAL, THE CAUSE OF CONVULSIONS; OPISTHOTONOS MARKED; RELIEF BY OPERATION.

BY PAUL FAVER, M.D., FAYETTEVILLE.

Since the attention of the profession has been specially directed, by Dr. Sayre, of New York, to the many nervous phenomena resulting from this trouble, and the almost wonderful results achieved by operation, it is now not at all uncommon to see cases reported in our medical journals, in which these unfortunates, by a very simple operation, are rescued from a miserable condition and restored to health and happiness.

I am induced to report the following case simply to add one link to the chain of support for this operation:

March 13th, 1878, was called to see child of G. W——, aged eleven months, from whom I obtained the following history: From birth it had symptoms of spinal weakness; was never bright and lively; was unable to hold its head erect without its falling to one side or the other; was continually restless, and frequently its manner seemed indicative of suffering.

This child had been, since birth, uuder the care of two physicians, who, without suspecting the real trouble, directed their treatment to derangement of its digestive system—assuring its parents that it would outgrow its nervous derangements.

When first seen, March 13th, I found its condition as follows: Presented an idiotic appearance; violent contractions of muscles of spine—opisthotonos; alternated contractions and relaxation of muscles of hands and arms, as seen in some well marked cases of chorea; unable to bear its weight upon its feet; restless and very fretful. Upon examination, I discovered that the prepuce was unnaturally large (which is generally the case), and completely adherent to the entire

glans, giving to the meatus, which was unusually small, a bird's eye appearance. I proceeded to break up the adhesion, and operated by circumcision in the usual manner. Three weeks from date of operation, my little patient was able to bear its weight upon its feet; its appearance was much more cheerful and lively; symptoms of opisthotonos gradually subsided; much better use of hands and arms—indeed, all the symptoms which are directly the result of the adherent prepuce are gradually subsiding, and my little patient bids fair to soon be a bright, cheerful and happy boy.

RUPTURE OF THE UTERUS, AND ESCAPE OF THE FŒTUS INTO THE ABDOMINAL CAVITY.

BY J. L. STEPHENSON, M.D., GRIFFIN.

Early on the morning of the 14th of June, I was called to see a negro woman named Tempe, belonging to Mr. A. C., of Meriwether county, Ga. Being absent from my office, another physician saw the case, and pronounced it a case of invagination of the bowels, and prescribed accordingly. About 10 A. M. the same morning, I saw the case. Tempe had been a very stout, athletic and healthy woman. Aged twenty-eight years, weighed 160 pounds, unmarried and had no child. When I first saw her, her general appearance indicated considerable prostration. The surface cool and clammy. The pulse fifty-six, and so soft and thready as to be scarcely perceptible at the wrist. The breathing hurried, but soft and smooth. She complained of some nausea, but there was no vomiting. Her kidneys acted freely. Her bowels had not been moved, although she had a full dose of oil that morning. There was no appearance of hemorrhage, either from the nose, mouth, vagina or rectum. Her abdomen was much distended, but not tympanitic. Percussion and ballottement failed to indi-

cate either pregnancy or dropsy. The abdominal muscles had lost their resiliency, and imparted a doughy feel to the touch. Her mind was clear. She denied being pregnant, and declared that she had been regular in her catamenial periods up to that time. She said that when she arose from her bed that morning she felt perfectly well, but after a few minutes she was attacked with a sharp, cutting pain in the umbilical region, which had subsided into a dull, heavy aching. Said she had received no fall, blow, or other injury, and had felt no other pain.

I prescribed a large enema of oil and turpentine, gave her full draughts of brandy, and applied mustard to the extremities. In about twenty minutes the enema was returned, followed by a copious fæcal evacuation. After this she sank rapidly, and at 4 P. M. she died without a struggle. One hour after death I made an incision through the abdominal walls from the umbilicus to the pubes. I found the abdominal cavity full of coagulated blood; and imbedded in a large mass of this blood I found a fœtus, about four and a half months developed. Examining the uterus, I found it lacerated down its anterior aspect from the fundus to the cervix. The secret of the whole matter was revealed. This woman had evidently lacerated her womb by throwing her weight on it while resting it upon the upright post of her bed, a stump, or some other firmly-resisting body.

She misled me by denying that she was pregnant, by declaring that she had been regular in her menstrual periods, and by denying that she had received any injury from blows, falls, or other violence.

I have reported this case not only to give others the advantage of my experience, but also to ask one question. When I first saw this case she was not so much exhausted from the loss of blood as to necessarily produce death from

that cause alone. If I had received a correct history of the case when I first saw it, I think it would have enabled me to form a correct diagnosis. Now, suppose I had cut down upon the uterus, removed all extraneous matter from the cavities of the abdomen, and the uterus, applied some active styptic to the lacerated surfaces, drawn the edges of the laceration together, and held them in apposition by sutures, then closed the external wound, and treated the case upon general principles. Would I have been justified in such a course of treatment?

COCKLE-BUR REMAINING IN LUNG TWELVE YEARS—DEATH.

BY T. R. WHITLEY, M.D., DOUGLASVILLE.

W—— B—— inhaled a cockle-bur into his lung, when nine years and six months of age. It remained therein twelve and a half years, that is, until his death, recently. There was more or less inflammation of the lung the whole of this period. Pain was constantly present low down on the left side; could never lie upon that side. He coughed blood, at intervals, throughout the whole period.

He remained in this condition until January, 1877, when acute inflammation supervened, resulting in a large abscess which discharged in about three weeks after the acute attack. A large quantity (reported to me as two gallons) of pus was discharged through the mouth. This was so offensive as to render it almost impossible to remain in the room.

After fourteen or fifteen days, the pus having been discharged in small quantities all the while, he was seized with a violent fit of coughing. He felt the bur rise into his mouth, and removed it with his fingers. He lived three weeks after this, still coughing up a quantity of offensive pus. The day before his death, the matter brought up appeared to be of a gangrenous nature.

DIAGNOSTIC VALUE OF THE SOFT PALATE, AS COMPARED WITH THE TONGUE, IN CERTAIN PATHOLOGICAL CONDITIONS.

BY WM. ABRAM LOVE, M.D., ATLANTA.

In the current medical literature of the day—in the authorized text books of our schools, and, more particularly, in the standard works of the older writers, much stress is placed upon the appearance of the *tongue*, as an index to certain pathological conditions of the system. In an especial sense were these varied appearances regarded as indicative of the condition of the stomach, the intestinal canal, and the hepatic secretions. That these appearances were sometimes erroneously interpreted, was very vividly impressed upon my mind, in my early professional life, by a foot-note, in a small, but valuable work, then recently from the press. I may be excused for quoting that foot-note, in its entirety, in this connection, as it will serve me a purpose, just here, and may, as it has me, serve others a purpose, elsewhere.

In describing, for illustration, a case of "clavus hystericus of the head, kept up by inanition," the writer says [Billing's Principles of Medicine—Amer. Edit., 1842—p. 220–1.]: "—— there was no fever; the pulse was jerking, as we find

after hemorrhage (repeated blood-letting), but not firm; the tongue not foul, but white, as we always find it with an empty stomach." Then comes the foot-note:

"I say, always; and there is not a more common error, than to consider this natural appearance morbid. Thus, persons who are in the habit of thinking themselves, bilious, and taking physic, look at their tongue when they rise in the morning, and find it white. A good breakfast will make it look red, unless they take a dose of salts, Seidlitz powder, or, sometimes, even whether they do or not. The same person will, perhaps, put out the tongue before a looking-glass, just before dinner time, and, seeing it white, forego a part of a wholesome meal, which would bring the tongue to the natural color of redness, which it assumes after eating, from its natural paleness before eating, unless they be gourmands and hypochondriacs at the same time; in which case they will run the hazard of eating, and take a calomel 'peristaltic persuader' afterwards. I have been, constantly, in the habit of warning my young medical friends to consider, when they see a white tongue, what time of day it is, and *not to purge* for merely a white, or, more properly, a pale tongue.

"The tongue is constantly very properly inspected, in disease, as it affords an evidence of the state of the mucous membrane of the stomach and bowels with which it is continuous. In health it is not of a bright red, but has a pale bloom on its surface, in consequence of the tips of the villi or papillæ being less injected with blood than the lower parts; when the stomach is empty, it contains less blood, its villi are, of course, paler, and those of the tongue are nearly white; but observe, the tongue is moist; whereas, in the beginning of synocha or pleurisy, or other inflammation, the stomach is empty from anorexia, and the tongue is white;

but it becomes dryer than from a mere empty stomach, and more or less coated, arising from the evaporation of the watery parts of the saliva and mucus of the mouth, which leaves the membrane indued with a more viscid covering than natural. After eating, when the stomach is in a state of healthy activity, the tongue becomes redder; but still it is not of a bright-red hue, which only takes place when the membrane of the primæ viæ is in a congested or inflamed state, as in dysentery, in phthisis when colliquative diarrhœa exists, at the termination of typhoid fever when there has been (in reality) gastro-enteritis or inflammation of the glandulæ agminatæ, etc.

"In the progress of severe fever, when the secretions are suspended, the tongue becomes dry, and the mucus which does exist dries, and forms a brownish or blackish crust, and the papillæ become so much shrunk down to the level of the rete mucosum, that when the tongue becomes clean, on recovery, it looks glazed and smooth, and some time elapses before the papillæ rise up again.

"In chronic affections, accompanied with a languid and flabby state of the primæ viæ, a discolored state of the mucus occurs, constituting, what is called, a foul tongue."

Few more concise descriptions of the pathognomonic indications presented by the appearance of the tongue, will be found in our medical literature; but these relate more particularly to the appearance of the upper surface of the tongue as indicating *physiological*, or *pathological* conditions of the mucous membrane of the stomach and intestinal tube, yet the tongue is in many cases—as well as other portions of the oral cavity—an indicator, pointing, to many and varied pathological conditions of the general system, and of special tissues. As a contribution illustrative of this may

be mentioned "*a peculiar appearance of the tongue in malarious diseases.*"

While the appearance of the tongue indicative of physiological and pathological conditions of the alimentary mucous membrane, presents itself on the upper papillated surface—the *border* and *outer edges* present the peculiarity indicative of malarial toxæmia. It consists in a peculiar *pectiniforme* appearance of the edges of the tongue, as though these edges had been under the pressure of the sides of the teeth of a comb—just as, in certain "languid and flabby" states of the primæ viæ, we find the edges presenting a crenated appearance, produced by the indentations resulting from the pressure of the teeth in the oral cavity—just within this *pectiniforme edge* making the outer border of the upper surface, of greater or less width, in different cases, or different degrees of malarial toxæmia, there appears a *smooth margin*, both the *pectiniforme edge* and the *smooth margin* presenting a *cleaner appearance* and *a brighter hue* than the other portions of the surface of the organ. For over thirty years, in an active practice, most of the time within malarial districts, these peculiarities of the edges and borders of the tongue have been marked, as indicative of malarial poison, not only in the malarial fevers of the paludal districts, but in the protean forms and varied complications through which the effects of this subtle poison may be traced. While it had been my good fortune, in early professional life, to detect this condition as a pathognomonic indication of malarial poison, which experience, until this day, has more fully confirmed, and, while I have profited by it during these long years of professional toil, still, to my friend, Dr. T. C. Osborne, of Greensboro, Alabama, is due the credit, of having first called the attention of the profession to the fact, through the recognized channel of commu-

nication—the medical press (*vide Trans. Amer. Med. Assoc.*, 1869), and I take pleasure in awarding him this credit, with the expression of regret, that his paper did not fall into the hands, or attract the attention of more of my professional brethren.

Dr. Osborne has preferred the term "*crenated edge*" in his description given in his paper. This, to our mind, without an illustration (which he presents), would more nearly convey the idea of the indentations produced by the teeth in the oral cavity in the "flabby" condition alluded to above, when the term "*crenated*" is applied to such a body or organ as the tongue; we have, therefore, held to our original descriptive term, *pectinated*, or *pectiniforme*, with the explanation, illustrative, given above.

These allusions to certain conditions of the tongue, as indicative of certain pathological conditions of the primæ viæ, or of the general system, have been made more particularly as introductory to, if not illustrative of, certain other conditions often presented in another portion of the oral cavity, and their value, in a diagnostic, as well as a pathological and therapeutical point of view. We allude to—

THE VALUE OF THE APPEARANCE OF THE PALATINE VAULT AND SOFT PALATE IN DIAGNOSIS.

On the sides of a median line drawn from the point of the alveoli separating the two central superior incisor teeth to the centre of the base of the velum palati, there are two eliptical, or almond-shaped, spaces, where the inferior surface of the palatine bones are covered with only periosteum and and mucous membrane, constituting, we will say, *the palatine vault or dome.* An extension of this membrane backwards, united with a like extension from the superior surface of the bone, or the floor of the nasal cavity, to the velum palati and anterior half arches, constitutes *the soft palate*—the palatine

muscles, to some extent, taking the place of the palatine bones. This muco-periosteal and muco-musclar membrane is supplied with blood by the superior palatine and naso-palatine arteries, whose branches anastomose with each other and with their congeners. Their capillaries, particularly in the *palatine vault*, though exceedingly numerous, are, at the same time, exceedinly small, so much so that they allow of the passage of blood corpuscles to only a very limited extent in their normal condition, as in the conjunctiva, sclerotica, and other membranes and tissues that circulate, alone, liquor sanguinis, normally, and blood corpuscles pathologically. The great vascularity (capillary) of both the mucous and the periosteal membrane, together with the great transparency of the same and the bony and muscular base, gives us an opportunity of noting conditions that are of vast importance, both pathologically and therapeutically. Among these may be enumerated:

1st. The color of the liquor sanguinis;

2d. The arteriolic tension, or atony, in resistance or non-resistance to the passage of blood corpuscles; or, in other words, by the inspection of these spaces we are enabled to approximate an estimate of the amount of coloring matter (biliverdine) tinging the non-corpuscular blood tissue, in the first place, and, secondly, we are enabled to approximate pretty correctly the "working" of the vaso-motor nerve system, particularly along the line of the alimentary canal. (This does not apply, we would parenthesise, in cases of local irritation in these palatine tissues, except so far as relates to these local membranes.)

Practically, these facts are of much advantage, and, for over a quarter of a century, I have been in the habit of taking advantage of them as guides in the diagnosis and treatment of disease. During this period, the rule has been,

with me, to examine the roof of the mouth as regularly as I have occasion to examine the tongue. So constant has been this habit with me, that I am frequently asked the question by medical students: "*Why do you always examine the throats of your patients in the clinics?*"

I have found that in that condition of the system to which the term "*bilious*" has been applied, this muco-periosteal membrane invariably presents the yellow hue of lighter or deeper shade, indicative of the existance of *biliverdine*, in the liquor sanguinis. This yellow tinge or color will vary in different cases, or at different times in the same case, from the lightest canary, to the deepest orange or saffron, and the depth of shade will indicate the amount of "*biliousness*" or the extent to which biliary coloring matter is retained in the blood tissue. As this tinge deepens, the skin becomes more and more sallow, approaching towards that appearance exhibited in mild cases of acute jaundice. In all cases, under any and all circumstances, where bile has been "re-absorbed" or, where it has not been eliminated from the blood—in malarial toxæmia—in duodinitis—in biliary cystitis—and in every condition of the system, where, by its existence in the liquor sanguinis, or where, as a result of such pathological condition the tissues become tinged, the color will present itself first and deepest in the muco-periosteal membrane in the mouth as designated above. The only condition obstructing its appearance, will be where there exists engorgement, irritation or inflammation, distending the minute capillaries to such an extent as to admit of the blood corpuscles, when the redness of the tissue swallows up the fainter yellow hues. By examining this portion of the roof of the mouth we gain a better knowledge of the condition of the portal system and hepatic action, than the tongue indicates as to the condition of the stomach, in the

circulation in its mucous membrane or the action of the gastric glands.

In all that class of diseases in which the general condition of the system demands the use of remedies known as *cholagogues*, of whatever kind, and in all forms and complications, experience has taught me that I risk nothing in saying that the muco periosteal membrane in the roof of the mouth, will by its yellow tinge invariably indicate the necessity for their administration—*per contra*, I may say, with equal confidence, that the absence of this yellowness indicates, with equal certainty, that such a class of remedies have been sufficiently used, or are not needed. For twenty-five years this has been my guide, and I do not feel to-day that I have ever been misled by it. Other members of the profession, whose attention I have called to the fact long years since, tell me that as a guide in their daily professional work, it has served them the same good office. Attention to it will do away with much of the use of, or rather abuse of, *calomel.*

In other pathological conditions than this, the appearance of the palatine surface will serve us a good purpose as a guide. Thus, for example: in all that class of diseases known as *exanthema majora*, the eruption makes its appearance in the roof of the mouth, from *twelve to twenty-four hours*, and, in many instances, longer, before it appears on the cutaneous surface. In *small pox*, in *scarlet fever*, in *measles* —in all their grades—the eruption may be looked for, with confidence, in this region long before it can be detected at any other point, and, as the eruption is often the last link in the chain of evidence necessary to decide a question of diagnosis, the knowledge of this fact will always equal the importance of the question at issue—it has, in some instances, served me a valuable purpose.

In *intestinal* irritation and inflammation, in the approach, progress and decline of enteritis and dysentery, the soft palate is a better indicator as to the condition of the intestinal mucous membrane than the tongue.

The effects of the retention of the effete matters, biliverdine and cholesterin, are, depression of the nervous system, interrupted functional action, frequently depression of cardiac action, neuralgia, and a variety of pathological symptoms, not necessary to dwell upon in a paper like the present. The sole object of which is to direct attention to the soft palate and its value in diagnosis, particularly in bilious derangements.

THE TAR BANDAGE.

BY C. B. LEITNER, M.D., COLUMBUS.

I wish to call the attention of the medical profession to a new and efficacious, to me at least, dressing for wounds, namely: the tar bandage. The advantages that I claim for this dressing are, its perfect protection against the deposit of the fly; the stability with which it retains its position; and, if the theory be true, as a preventive and a destoyer of parasitic organisms. I am satisfied now, had this treatment been adopted during our late civil war, hundreds of lives would have been saved by it, if from no other cause, certainly from its protective powers against inoculation from erysipelas, gangrene, etc., for this bandage acts as a perfect shield to the wound.

I could record six or eight cases treated by this process, but will report only one, a very difficult and obstinate case, of a negro man, thirty-five years of age, deaf and dumb. On the 27th of July, 1875, this negro was run over by the cars. His tibia and fibula, six inches below the knee, were crushed, the soft parts converted into a fibrous mass, leaving, however, enough of the gastrocnemius muscle to form a flap. Assisted by Dr. Wynne, I amputated the leg two inches below the lower insertion of the tendon of the patella. The flaps were drawn and two or three sutures taken, then tarred strips of cloth were applied, as adhesive strips would have been used, for six to eight inches above the wound. The roller band-

age was then placed over these, and the whole well tarred.

I wish to call attention to another advantage connected with this dressing—that is, it does not require re-adjusting so often as other modes, only every twelve or fourteen days, unless some constitutional disturbance should be apparent.

The leg was not dressed again until the 6th of August, notwithstanding the weather was the warmest I ever experienced in Georgia, and the subject perhaps one of the worst that ever happened to such an accident. His bowels were loaded with unripe fruit, and with every kind of foreign matter that a tramp, at that season of the year, could procure, besides, he had upon his head, arm and shoulder two or three badly contused wounds, which were treated by the application of tar ointment. The leg was not dressed the third time until the 2d of September, when he was turned over to the nurse, and in a week he was out upon crutches.

In applying for the first time the bandage, at the most dependent part a little V-shaped valve was cut, to allow the escape of pus. He was not annoyed by a fly, or by any bad symptoms, and the recovery was very speedy, which I attributed to non-interference with the bandage. I am perfectly satisfied in my own mind that the frequent dressing of wounds is a source of great irritation, to say nothing of the amount of granulations that are broken up. Should there be any mischief going on under the bandage, the constitutional effects must be apparent.

I have had five or six other cases, though not of so serious a character, in which the bandage was never removed until the wound was entirely well. I will report, however, a case of a negro woman, Elvira, aged 60 years, upon whose hand fell a large window sash, laying open the index finger its entire length, to which the tar bandage was applied, and not removed until a perfect recovery had taken place. In four

other cases the wounds were made by sharp instruments, in which the same treatment, without the sutures, was used, and the result, in every case, was identical.

My manner in preparing this fresh pine-tar ointment, is to put the tar into a glass vessel, and place the vessel into a pot containing water; after the water has boiled for a half hour, the vessel containing the tar is set aside until all the foreign matter is precipitated, then decant, leaving the foreign matter at the bottom; finally, add one part of sweet oil to twenty parts of the tar. After the roller bandage is adjusted, in amputations, this ointment should be thoroughly applied, once in four or five days being sufficient. In wounds, cloth strips can be used as one would use adhesive strips. I would recommend cold water dressings to the wound.

I hope my professional brethren will give this a trial, and meet with the same success that has attended my efforts.

OBSTINATE CASE OF HICCOUGH.

BY J. B. ROBERTS, M.D., SANDERSVILLE.

On the 15th of October, 1876, I was sent for to visit Miss T., aged about sixteen years, living in the country, seven miles from my office. I found her suffering with hiccough. Her mother stated to me that she had been suffering about three days, and seemed to be completely exhausted. I learned that she had had two or three previous attacks, was treated by Dr. H., and after trying various remedies prescribed by him, and all the remedies that could be suggested by her neighbors, without any relief, she had sent for me. I gave her two large doses of morphine which had a very happy effect. She married a short time after this, became pregnant, and got along well until October, 1877, when she was delivered of a fine boy. A few days afterwards, October 30th, I was sent for again, and when I arrived, found her in about the same condition as in October, 1876, so I prescribed large doses of morphine with the same happy results. March 21st, 1878, I was sent for again (she now lives about nine miles from my office) to visit her as soon as possible. I arrived at her bed side about ten o'clock at night and found her resting very quietly. She stated that she had suffered a great deal for two days, but had taken the medicine I left for her very freely, and at last had obtained relief. The next day the hiccouch commenced again and continued at intervals for several days,

until April 4th, I was sent for again in great haste, and when I arrived, found her in a worse condition than I had ever seen her. She was quite feeble, had very little use of herself, her throat was very sore, but did not seem to be swollen, and the noise she made at each respiration could be heard about one hundred yards from the house. Morphine, bromide of potassium, hydrate of chloral, and several other remedies, all failed to give relief at this time, and I thought my patient would die from exhaustion, so I decided to remain with her as long as I could and administer chloroform. This seemed to relieve her as long as she remained under its influence, but so soon as the effects of the chloroform passed off, the hiccough would commence again. I had to persevere in this treatment about three days before the hiccough ceased entirely.

Now, if some medical gentleman will suggest a remedy to prevent these attacks, I shall certainly feel very grateful.

REPORT OF THE COMMITTEE ON NECROLOGY.

SAMUEL G. WHITE, M.D.,

was born, in Milledgeville, Georgia, November 17th, 1824, and died, of paralysis, May 13th, 1877.

He received his degree of Doctor of Medicine from the Jefferson Medical College, Philadelphia, March 20th, 1845, and served, for a short time thereafter as Demonstrator of Anatomy, in that time-honored institution. In January, 1846, he entered the United States Navy, and served as a naval medical officer until the termination of the Mexican war. In 1859, he visited Europe, and remained abroad until the breaking-out of the late civil war. At the commencement of that struggle, he returned to his native country, and was commissioned surgeon in Cobb's Legion, in which position he rendered valuable aid to the Confederate cause.

Dr. White was no less esteemed as a private citizen than as an able and accomplished physician and surgeon, and a faithful, christian man. At the time of his death, he was President of the State Medical Board; he was an elder in the Presbyterian Church, and, at one time, was Vice-President of the Medical Association of Georgia. In the death of Dr. White, the medical profession, the church, society and the State have lost a faithful and devoted member, a true and representative citizen.

E. J. KIRKSCEY, M.D.,

was born in Washington county, Arkansas, December 10, 1837, and died from pelvic abscess, in Columbus, Georgia, June 1, 1877.

He graduated at the Jefferson Medical College in 1858, and began the practice of his profession in Selma, Alabama, where he resided until the commencement of the late war. He entered the Confederate army as assistant surgeon in 1860, and was assigned to duty with the Fourth Alabama regiment. In March, 1862, he was commissioned surgeon and transferred to the Western army.

In 1868, he graduated at the Atlanta Medical College. In 1869, he was elected Grand Worthy Chief, for the State of Georgia, by the Grand Lodge of Good Templars. He was also a Mason and Odd Fellow.

At the termination of the war, he commenced the practice of medicine in Columbus, Georgia; but, after several years, he abandoned his chosen calling, and accepted the appointment of general southern agent of a life insurance company.

Dr. Kirkscey was an active and zealous member of this Association up to the time of his death, and his loss will be sorely felt.

JAMES FORT BOZEMAN, M.D.,

was born in Milledgeville, Georgia, May 16th, 1824, and died of congestion of the bowels, after a few hours illness, at his home in Atlanta, September 10th, 1877.

He received his collegiate education at Oglethorpe College, and graduated as Doctor of Medicine in the Medical Department of the University of Pennsylvania in 1846. He entered upon his professional career in Columbus, Georgia, in 1847. In 1849, he was commissioned assistant surgeon in the United States Army, and accompanied a battalion of

mounted volunteers from Georgia to Mexico. At the close of the Mexican war he resumed the practice of his profession in Columbus, which he continued until compelled, on account of ill health, to abandon so laborious a life in 1862. In 1871, Dr. Bozeman removed to Atlanta, and again engaged in the practice of medicine, but after a year, owing to feeble health, it was permanently abandoned.

Dr. Bozeman was at one time Mayor of the city of Columbus and President of the Georgia Home Insurance Company. He was a director of several railroads, and at the date of his death was President of the Board of Trustees of the State Asylum for the Insane, and special financial agent of the State of Georgia. He was for a number of years an honored deacon of the Baptist church, and, as a christian, a physician, a citizen and a public officer, was ever faithful to his trusts and true to himself. In all of his relationships, both public and private, he typified the earnest christian gentleman, and after a life in which every act was characterized by the strictest integrity, he has left behind the spotless record of a career worthy of emulation.

MOSES T. FORT, M.D.,

was born in Twiggs county, Georgia, May 3, 1825, and died of pneumonia, supervening upon diabetes—from which disease he had suffered for a number of years—January 4, 1878.

Dr. Fort graduated at Oglethorpe College, and received the degree of Doctor of Medicine, from the Jefferson Medical College, Philadelphia, in 1848.

He commenced the practice of medicine in Twiggs county, Ga., where he resided for a few years only. He then removed to Pulaski county, Ga., and there pursued the practice of his profession for twenty five years.

Dr. Fort enjoyed, in an eminent degree, the esteem of the community, and was held in high regard both as a physician and citizen.

THE MEDICAL ASSOCIATION OF GEORGIA will convene in the city of Rome, at its next—the thirtieth—annual session, on the Third Wednesday in April (16th), 1879.

CONSTITUTION AND BY-LAWS

OF THE

MEDICAL ASSOCIATION OF GEORGIA.

CONSTITUTION.

[ADOPTED 1873.]

ARTICLE I.

NAME.

The name and style of this Association shall be, "THE MEDICAL ASSOCIATION OF GEORGIA."

ARTICLE II.

OBJECTS.

SECTION 1. The objects of this Association shall be to organize the medical profession of the State in the most efficient manner possible; to encourage a high standard of professional qualifications and ethics, and to promote professional brotherhood.

ARTICLE III.

MEMBERS.

SECTION 1. There shall be only one class of members in this Association. Every regularly educated medical man within the limits of this State, who is a graduate of a regular Medical College in good standing, and who adopts and

conforms to the Code of Ethics of the American Medical Association, shall be eligible to membership in this body.

ARTICLE IV.

OFFICERS.

SECTION 1. The officers of the Medical Association of the State of Georgia shall be as follows: 1st. One President; 2d. Two Vice-Presidents; 3d. One Secretary; 4th. One Treasurer; 5th. Five Censors.

SEC. 2. The President shall be elected for one year; the Vice-Presidents for one year; the Secretary for five years; the Treasurer for five years—but every officer shall continue in office until his successor is duly elected and installed in office.

SEC. 3. The Board of Censors shall be elected at the present session by the Association—one for a period of five years, one for four years, one for three years, one for two years, one for one year; and annually hereafter the vacancy occuring in the Board of Censors shall be filled by election.

ARTICLE V.

PRESIDENT.

SECTION 1. The President shall be the chief executive officer of the Association. He shall preside at all the meetings of the body, preserve order, and give the casting vote when necessary, and perform such other duties as parliamentary usage imposes on presiding officers.

SEC. 2. He shall prepare and deliver, at the opening of each annual session, an address on some subject connected with the interests and objects of this Association.

SEC. 3. He shall appoint annually the requisite number of delegates to the American Medical Association, and to such other scientific bodies as it may be expedient to have this Association represented in.

SEC. 4. He shall appoint an orator, whose duty it shall be to prepare and deliver a public address on some subject connected with medicine or the medical profession, at the next annual meeting after his appointment.

SEC. 5. He shall, in the intervals between the annual sessions, direct and control the general policy and business of the Association, but always with careful attention to the precedents and customary usages of the Association, and to its constitutional provisions.

ARTICLE VI.

VICE-PRESIDENTS.

SECTION 1. The Vice-Presidents, in their order, shall, in case of the absence or the death of the President, discharge all the duties belonging to the presidential office.

ARTICLE VII.

SECRETARY.

SECTION 1. The Secretary shall have charge of all the books, papers, and records of the Association, except those belongiug to the office of Treasurer.

SEC. 2. He shall record the minutes of the Association at all its sessions.

SEC. 3. He shall conduct the correspondence of the Association under the direction of the President, and shall be chairman of the Publishing Committee.

SEC. 4. He shall keep the roll of the members of this body who have retained their membership by compliance with the provisions of this Constitution, and also the names of those who have forfeited membership, together with the cause of such forfeiture.

SEC. 5. In the absence of the Treasurer, he shall collect the usual dues of the members in attendance at the regular sessions.

SEC. 6. The necessary expense incurred by the Secretary, in attending the annual sessions, shall be defrayed out of the funds of the Association.

ARTICLE VIII.

TREASURER.

SECTION 1. The Treasurer shall collect the annual dues and have custody of all the moneys belonging to the Association, and shall respond to the calls of the Secretary by order of the President, as far as he may have funds in his possession.

SEC. 2. He shall make annual reports of the financial condition of the Association, and the several amounts received during the year, and from whom; the several amounts due by the Association—if any—to whom, and on what account; the several amounts due to the Association—if any—by whom, and on what account.

SEC. 3. The necessary expense incurred by the Treasurer, in attending the annual sessions, shall be paid out of the funds of the Association.

ARTICLE IX.

CENSORS.

SECTION 1. The Board of Censors shall hold annual meetings, concurrently with the annual sessions of the Association, to whom shall be referred all applications for membership, with vouchers from two members, and in such case their decision shall be reported to the body for action. Three of their number shall constitute a quorum, and the Chairman and Secretary shall be designated by the President.

SEC. 2. They shall take cognizance of all offenses against the Association or its Code of Ethics, and shall be authorized

to strike from the list of membership all violators of its regulations, and shall report the names of the individuals and the offense for which action has been taken immediately to the Association, at which time, or at the next succeeding meeting, all such individuals may have the right of appeal to that body.

ARTICLE X.

FINANCES.

SECTION 1. Every member of the Association shall pay annually into the Treasury such sum as the Association may determine; which amount, it is expected, will be paid during the session of the body.

ARTICLE XI.

CONSTITUTION.

SECTION 1. This Constitution shall take immediate effect from its adoption.

SEC. 2. In the event of a failure of a quorum of the Board of Censors to attend at any annual meeting, it shall be the duty of the President to supply the vacancy by a temporary appointment.

The By-Laws now in operation, and Order of Business, are adopted so far as they agree with the new Constitution.

ARTICLE XII.

ANNUAL MEETING.

The Annual Meeting shall take place on the third Wednesday in April, and at such place as shall be designated by a majority of the Association.

BY-LAWS.

[ADOPTED 1875.]

ORDER OF BUSINESS.

The order of business of this body, unless altered by a two-thirds vote of the members, shall be as follows:

1. Calling the Association to order by the President, or, in case of his absence, by one of the Vice-Presidents.
2. Report of Committee of Arrangements.
3. President's Address.
4. Reading notes from absentees.
5. Election of members.
6. Reports of special committees.
7. Report of Committee on Publication.
8. Report of Committee on Necrology.
9. Report of Sections for Congressional Districts. [To be read by title and held subject to call of the Association.]
10. Voluntary Communications. [To be read by title and held subject to call of the Association.]
11. Appointment of Nominating Committee by the President. [This committee shall consist of one member from each county represented in the meeting. It shall nominate officers, standing committees, and the Sections for Congressional Districts. Their report shall be subject to the action of the Association.]
12. Selection of place for next annual meeting.
13. Unfinished business.
14. New business.
15. Report of Nominating Committee.
16. Appointment of Orator by the President.

STANDING COMMITTEES.

The Committee of Arrangements shall consist of five

members who reside at the place selected for the ensuing meeting. It shall be their duty to provide suitable accommodations for the meetings of the Association, and to superintend the registration of the members in attendance.

The Committee on Publication shall consist of four members in addition to the Secretary, who is chairman *ex-officio.* They shall provide for the publication of the minutes of the session, together with such papers as are deemed worthy. They shall also append to each volume of the Transactions a copy of the Constitution and By-Laws of the Association, roll of membership, and Code of Ethics of the American Medical Association.

The Committee on Necrology shall consist of five members, whose duty it shall be to procure memorials of deceased members, and present them for publication in the Transactions.

SECTIONS.

Three members from each Congressional District shall be appointed as a Section on Surgery, three a Section on Practice of Medicine, and three a Section on Gynæcology. It shall be the duty of these sections to present, annually, to the Association, a report on the subjects connected with their respective departments.

ASSESSMENTS.

Each member shall pay annually to the Treasurer such sum as the Association may determine.

OFFICERS—TIME OF ASSUMING THEIR DUTIES.

The Secretary and Treasurer shall enter upon the duties pertaining to their offices at the time of their election; the President, Vice-Presidents, and Censors at the commencement of the annual meeting succeeding their election.

AMENDMENTS.

[Any change in these By-Laws can only be made by a vote of two-thirds of all members present.]

I.

Physicians cannot become members of this Association unless present during the session, or the initiation fee of five dollars accompanies the application.

II.

The initiation fee for membership shall be five dollars, and the annual assessment five dollars, except for members who have been that year elected.

AMENDMENTS ADOPTED 1878.

Resolved, That an initiation fee of *five dollars* shall be required of every new member hereafter elected into the Association; which fee must accompany the application for membership.

Resolved, That an annual dues of *two dollars* from each member in attendance upon the meetings of the Association shall be paid, and the name of the member registered, before taking his seat in the Association, or participating in its deliberations.

Resolved, That an annual dues of *one dollar* from each absent member of the Association shall be paid to the Treasurer, on or before the first day of May of each current year.

Resolved, That the Treasurer shall, immediately after each meeting of the Association, issue a call for the dues of absent members, by postal card, impressing upon them the need of prompt payment of the small assessment herein provided by every member of the Association, and notifying them of the constitutional provision requiring the names of delinquents to be stricken from the roll of membership by the Secretary.

III.

The name of any member who shall fail for two consecutive years to pay the annual assessment, shall be dropped from the roll of membership, the Treasurer first notifying such member of the state of his account.

IV.

Any paper presented to the Association, and recommended for publication by the committee, shall not be published in any journal until the Secretary shall return it, announcing that the Committee on Publication decides that no Transactions will be issued.

V.

The names of all applicants for membership shall be first presented to the Association in body, and then referred to the Board of Censors.

VI.

All papers intended to be published in the Transactions of this Association shall be placed in possession of the Secretary within two weeks after adjournment.

ROLL OF MEMBERS

OF THE

Medical Association of Georgia.

ABBREVIATIONS—P.—President. V.P.—Vice-President. S.—Secretary. C.S.—Corresponding Secretary. T.—Treasurer. O.—Orator. C.—Censor—indicating the offices the member holds or has held.

[The Secretary will esteem it a favor if any member will promptly notify him of inaccuracies or omissions in the roll.]

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.
ALEXANDER, L. B	Forsyth	Monroe	1877
Alexander, L. G	Atlanta	Fulton	1878
Alexander, Jas. F. (T. & V-P)	Atlanta	Fulton	1849
Alfriend, E. W	Albany	Dougherty	1852
Anderson, R. B	Roswell	Cobb	1872
Anderson, W. A. J	Oxford	Newton	1873
Armstrong, W. S	Atlanta	Fulton	1866
BAILEY, J. W	Gainesville	Habersham	1861
Baird, Jas. B. (S.)	Atlanta	Fulton	1872
Ballinger, M. R	Rome	Floyd	1860
Banks, J. T. (P.)	Griffin	Spalding	1858
Bardwell, E. L	Talbotton	Talbot	1872
Battey, Robert (C. & P.)	Rome	Floyd	1859
Battey, W. W	Augusta	Richmond	1876
Battle, H. L	Wadley	Jefferson	1868
Bell, A. A	Madison	Morgan	1858
Bivings, J. C.	Dalton	Whitfield	1873

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.
Blackshear, J. Emmett (T.)	Macon	Bibb	1866
Boring, Jno. M. (V-P.)	Atlanta	Fulton	1856
Bouchell, L. B.	Midville	Burke	1875
Boyd, Charles	Atlanta	Fulton	1878
Bozeman, E. K	Americus	Sumter	1877
Brantly, S. D	Sandersville	Washington	1849
Brown, A. P	Atlanta	Fulton	1859
Bruce, R. J.	Thomasville	Thomas	1874
Burgess, W. R. (T. & O.)	Macon	Bibb	1870
CALHOUN, A. W. (V-P.)	Atlanta	Fulton	1874
Calhoun, F. R.	Euharlee	Bartow	1873
Camp, W. A	Atlanta	Fulton	1878
Campbell, A. Sibley (O.)	Augusta	Richmond	1876
Campbell, H. F. (V-P. & P.)	Augusta	Richmond	1851
Campbell, Robert	Augusta	Richmond	1849
Carroll, R. C	Augusta	Richmond	1873
Carswell, B. S	Jeffersonville	Twiggs	1856
Chappell, T. A	Powers	Twiggs	1877
Charlton, T. J. (C.)	Savannah	Chatham	1869
Charters, W. M. (P.)	Savannah	Chatham	1851
Coleman, Jno. S	Augusta	Richmond	1868
Coleman, J. T	Perry	Houston	1851
Connally, E. L	Atlanta	Fulton	1860
Cooper, Geo. F. (C. S. & V-P)	Americus	Sumter	1849
Copeland, A. B	Hamilton	Harris	1878
Crawford, G. G. (V-P.)	Atlanta	Fulton	1859
Crump, E. L	Herndon	Burke	1872
Culberston, W. A	Cave Springs	Floyd	1859
DANIEL, J. M	Thomaston	Upson	1871
Deadwyler, M. P	Elberton	Elbert	1868
Dean, T. W	Atlanta	Fulton	1878
Dekle, Thos. S	Thomasville	Thomas	1874
Dostor, B. R	Blakely	Early	1873
Doughty, W. H. (C.)	Augusta	Richmond	1857
Drake, W. G	Atlanta	Fulton	1873
Dugas, L. A	Augusta	Richmond	1852
Duncan, William	Savannah	Chatham	1868

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.
EVANS, W. W	Oxford	Newton	1872
Eve, J. A	Augusta	Richmond	1852
Eve, R. C	Augusta	Richmond	1868
Eve, S. C	Augusta	Richmond	
FAVER, PAUL	Fayetteville	Fayette	1873
Fitts, W. W	Carrollton	Carroll	1878
Flewellen, E. A	Thomaston	Upson	1867
Ford, DeSaussure (V-P.& P.)	Augusta	Richmond	1857
Ford, O. R	Atlanta	Fulton	1877
Foster, Eugene	Augusta	Richmond	1875
Foster, W. H	Augusta	Richmond	1876
GAITHER, HENRY	Oxford	Newton	1851
Gay, D. E	Scarboro	Screven	1875
Goldsmith, W. T	Atlanta	Fulton	1871
Goodrich, E. C	Augusta	Richmond	1876
Gordon, C. P	Dalton	Whitfield	1861
Goss, I. H	Fort Lamar	Madison	1877
Gray, S. H	Forsyth	Monroe	1871
Green, Thos F	Milledgeville	Baldwin	1849
Greene, W. I	Fort Valley	Houston	1872
Greer, T. G	Roswell	Cobb	1872
Griggs, A. W. (O & V-P.)	West Point	Troup	1866
Griggs, J. W	West Point	Troup	1878
Grimes, Geo. J	Columbus	Muscogee	1872
Grimes, T. W	Columbus	Muscogee	1855
HABERSHAM, J. C. (V-P)	Savannah	Chatham	1866
Hall, Charles H. (C.)	Macon	Bibb	1870
Hall, W. H	Milledgeville	Baldwin	
Hamilton, J. L.	Stone Mountain	DeKalb	1859
Hammond, D. W	Macon	Bibb	1854
Hardee, B. W	Savannah	Chatham	1875
Harden, W. P	Smyrna	Cobb	1859
Hardeman, L. G	Harmony Grove	Jackson	1877
Harrell, W. J	Bainbridge	Decatur	1874
Harris, M .W	Perry	Houston	1853

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.
Hawkins, S. B. (V. P.)	Americus	Sumpter	1871
Hendrick, John B	Covington	Newton	1857
Heery, D. O. C	Atlanta	Fulton	1859
Hillsman, P. L	Albany	Dougherty	1871
Hinkle, J. B.	Americus	Sumpter	1870
Hollingsworth, W. T	Madison	Morgan	1857
Holmes, G. W. (V-P. P. & C.)	Rome	Floyd	1867
Holmes, J. B	Rome	Floyd	1872
Holt, William F	Macon	Bibb	1867
Hopkins, J. G	Thomasville	Thomas	1874
Hopkins, T. S	Thomasville	Thomas	1873
Howell, D. H	Atlanta	Fulton	1878
Hoyt, W. D	Rome	Floyd	1871
Humphries, J. R	Acworth	Cobb	
Hunt, D. O	Dalton	Whitfield	1859
Hunter, E. H. W	Louisville	Jefferson	1857
Hutton, Joseph			

JANES, THOS. P	Atlanta	Fulton	1852
Jarrett, E. V. (O.)	Bolingbroke	Monroe	1874
Jennings, W. P	Albany	Dougherty	1870
Johnson, D. T	Griffin	Spalding	1870
Johnson, H. V	Macon	Bibb	1874
Johnson, J. C	Macon	Bibb	1875
Johnson, Jno. M	Atlanta	Fulton	1866
Johnson, J. Thad. (O.S. & P.)	Atlanta	Fulton	1871
Jones, W. G	Augusta	Richmond	1852
Jordan, F. M	Cochran	Pulaski	1878
Jordan, M. G. W	Culloden	Monroe	1874

KENAN, THOS. H. (V-P.)	Milledgeville	Baldwin	1875
Kendrick, W G	Atlanta	Fulton	1874
King, Ferdinand	Atlanta	Fulton	1877

LALLERSTEDT, T. L	Lythonia	DeKalb	1868
Lee, H. B	Atlanta	Fulton	1873
LeHardy, Henry	Savannah	Chatham	1875
LeHardy, J. C. (T.)	Savannah	Chatham	1868

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.
Leitner, C. B	Columbus	Muscogee	1852
Lockheart, W. T	Milledgeville	Baldwin	1870
Logan, J. P	Atlanta	Fulton	1857
Longino, T. D	Palmetto	Campbell	1873
Love, Wm. Abram	Atlanta	Fulton	1866
MARTIN, JNO. D.	Savannah	Chatham	1867
Mathis, A	Sandersville	Washington	1872
McCleskey, G. L	Athens	Clarke	1857
McIntosh, T. M	Thomasville	Thomas	1875
McMillan, J. E	Albany	Dougherty	1870
McMillen, Jno. E	West Point	Troup	1872
Means, A	Oxford	Newton	1851
Miller, H. V. M	Atlanta	Fulton	1851
Mimms, Jas. S	Sylvania	Screven	
Mitchell, Thos. S	Hamilton	Harris	1872
Moore, K. P	Knoxville	Crawford	1871
Moore, J. T	Whitesburg	Carroll	1878
Moore, W. C	Clarkston	DeKalb	1861
Morgan, Y. H	Cochran	Pulaski	1871
Murphy, G. W	Bartow	Jefferson	1875
NASH, J. D	Jonesboro	Clayton	1878
Nisbet, R. B	Eatonton	Putnam	1853
Norton, R. G	Egypt	Effingham	1872
Nunn, R. J	Savannah	Chatham	
Nutting, C. W	Atlanta	Fulton	1877
O'DANIEL, WM. (T. & P.)	Bullard's	Twiggs	1870
Olmsted, J. C	Atlanta	Fulton	1878
PERKINS, J. O	Atlanta	Fulton	1878
Perdue, H	The Rock	Upson	1872
Perry, A. C	Covington	Newton	1878
Philpot, W. H	Talbotton	Talbot	
Pinckney, Charles	Atlanta	Fulton	1866
Pinson, A. J	Atlanta	Fulton	1878
Pope, J. E	Athens	Clarke	1876

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.
Powell, T. O.	Milledgeville	Baldwin	
Powell, T. S. (V-P)	Atlanta	Fulton	1857
Purse, B. S.	Savannah	Chatham	1872
RAINES, THOMAS	Atlanta	Fulton	1872
Rauschenberg, Charles	Atlanta	Fulton	1861
Ray, E. S. (V-P.)	Atlanta	Fulton	1867
Read, J. B.	Savannah	Chatham	1851
Rice, T. M. C.	Macon	Bibb	1872
Richardson, Jr., E. H. (O.)	Cedar Town	Polk	1878
Richardson, S. L.	Bullard's	Twiggs	1872
Ridley, R. B. (O. & C.)	Atlanta	Fulton	1870
Roach, E. J.	Atlanta	Fulton	1857
Roberts, J. B.	Sandersville	Washington	1875
Roy, G. G.	Atlanta	Fulton	1878
Rusk, W. J.	Clarkesville	Habersham	
SAMPLE, C. L.	Cannoochee	Emanuel	1875
Searcy, D. B.	Bolingbroke	Monroe	1849
Shaw, T. M.	Coosaville	Floyd	1878
Shefftal, B. F.	Savannah	Chatham	1878
Shi, A. H.	Bolingbroke	Monroe	1860
Shields, S. S	Crawfordville	Taliaferro	1878
Simms, T. W.	Jonesboro	Clayton	1876
Simmons, J. S.	Gainesville	Hall	1873
Simpson, C. A.	Atlanta	Fulton	1871
Slappey, J. G.	Buzzard Roost	Twiggs	1875
Slaughter, J. T.	Villa Rica	Carroll	1859
Smith, A. A	Hawkinsville	Pulaski	1875
Smith, C. D	Newnan	Coweta	1872
Smith, G. F.	Cartecay	Gilmer	1874
Smith, Hiram,	Augusta	Richmond	1876
Smith, J. B.	Perry	Houston	1870
Smith, R. M. (C.)	Athens	Clarke	
Stanford, F. A.	Columbus	Muscogee	1849
Steiner H. H	Augusta	Richmond	1857
Sterling, W. L.	Atlanta	Fulton	1878
Stevens, J. P.	Leesburg	Lee	1873

NAME.	POST-OFFICE.	COUNTY.	ADMITTED.
Stewart, T. S.	Marietta	Cobb	1855
Stone, Geo. H.	Savannah	Chatham	1875
Stout, S. H. (S.)	Roswell	Cobb	1866
Strother, C. S.	Barnesville	Pike	1870
Strother, Wm. A.	Albany	Dougherty	

TACKETT, W. B.	Cuthbert	Randolph	1878
Taliaferro, V. H.(V-P.)	Atlanta	Fulton	1857
Talley, H. M.	Nashville	Berrien	1875
Taylor, A. P.	Thomasville	Thomas	1873
Taylor, A. R.	Hawkinsville	Pulaski	1878
Taylor, J. P.	Senoia	Coweta	1859
Thomas, J. G. (V-P. & P.)	Savannah	Chatham	1867
Tidwell, P. M	Fairburn	Campbell	1859
Todd, J. S.	Atlanta	Fulton	1872
Turner, —			
Twitty, W. W	Camilla	Mitchell	1874

UNDERWOOD, J. B	Cave Spring	Floyd	1860

WALKER, T. F.	Cochran	Pulaski	1859
Ware, J. E. H.	Fayetteville	Fayette	1866
Waring, J. A.	Savannah	Chatham	1853
Wells, W. B	Red Clay	Whitfield	1873
Westmoreland, J. G.	Atlanta	Fulton	1849
Westmoreland, W. F.(P.)	Atlanta	Fulton	1856
White, L. J.	Atlanta	Fulton	1876
Williams, W. L.	Fayetteville	Fayette	1873
Wilson, H. L.(T.)	Atlanta	Fulton	1861
Wirsen, G. F	Rutledge	Morgan	1871
Wisdom, F. L.	Buena Vista	Marion	1873
Word, T. J.(V-P.)	Rome	Floyd	1874
Wright, P. H.	Macon	Bibb	1869
Wright, R. F.	Dalton	Whitfield	1872
Wylly, King	Atlanta	Fulton	1876

YONGE, EASTON	Savannah	Chatham	

IN MEMORIAM.

NAME.	COUNTY.	POST-OFFICE.	ADMITTED.	DIED.
Adams, C. B.	Richmond	Augusta	1868	
Alexander, J. R.	Floyd			
Arnold, R. D. (V-P & P)	Chatham	Savannah	1849	1876
Avery, J. C.	DeKalb	Decatur	1859	1873
Barkwell, T. J.	Pulaski	Hawkinsville	1859	
Battle, H. L	Monroe	Russellville	1849	
Bell, T. W.	Houston	Bushyville	1853	
Benson, J. W.	Bibb	Macon	1849	
Bignon, H. A.	Richmond	Augusta	1852	
Billing, S. A	Muscogee	Columbus	1855	1872
Black, R. C (T.)	Richmond	Augusta	1852	
Bomar, B. F.	Fulton	Atlanta	1859	
Boswell, S J. (V-P.)	Muscogee	Columbus	1855	
Bothwell, D. J.	Dooly	Vienna	1849	
Bozeman, J. F.	Fulton,	Atlanta	1855	1877
Brandon, D. S.	Thomas	Thomasville	1873	1878
Broadurst, W. W	Richmond	Augusta	1852	
Bunn, William	Houston	Wilna	1854	
Carroll, J. C.	Laurens		1857	
Castelew, F. G.	Bibb	Macon	1867	
Chase, D. S.	Richmond	Augusta	1852	
Clark, S. B.	Richmond	Richm'nd F'ct'ry	1852	
Coe, J. N		Flat Rock.	1856	
Colley, F. S. (P.)	Walton	Monroe	1856	
Cornwall, G. H.	Jasper	Hillsboro	1854	
Crawford, S. S	Richmond	Augusta	1857	
Cumming, H. M.	Richmond	Augusta	1868	
Cunningham, L. S.	Forsyth	Big Creek.	1859	1862
Cunningham, W. D.	Pickens	Jasper	1859	1866
D'Alvigney, N.	Fulton	Atlanta	——	1877

NAME.	COUNTY.	POST-OFFICE.	ADMITTED.	DIED.
Davenport, C. W	Oglethorpe	Point Petre	1852	
Davenport, H. S	Gordon	Calhoun	1859	
Davis, W. L	Dougherty	Albany		
Dean, S. H	Rockdale	Conyers	1856	
Dearing, W. E	Clarke	Athens	1852	1867
DeCortez, C. A	Chatham	Savannah	1872	
Dickinson, J. T	Dougherty	Albany	1857	
Dickinson, R. Q (V-P.&P.)	Dougherty	Albany	1850	
Dupree, L. J	Mitchell	Camilla		
Felder, W. L	Richmond	Augusta	1857	
Fort, Moses T	Pulaski	Hawkinsville	1859	1878
Franklin, M. A	Bibb	Macon	1849	
Frasier, W. M.	Pulaski	Hawkinsville	1850	
Gaither, B. F	Newton	Oxford	1852	
Gardner, J. W	Richmond	Augusta	1857	
Girardy, Edward	Richmond	Augusta	1852	
Gordon, J. M	Chatham	Savannah	1849	
Green, A. B.	Sumter	Pond Town	1849	
Green, H. K	Bibb	Macon	1849	
Gregory, J. D	Sumter		1849	
Habersham, J. C	Chatham	Savannah	1853	
Habersham, S. E	Putnam	Eatonton	1870	
Harris, S. N. (V-P.)	Chatham	Savannah	1851	1854
Harrison, Gabriel	Bibb	Macon		
Harriss, Juriah (O.& V.P.)	Chatham	Savannah	1852	1876
Hart, A. C.	Burke	Waynesboro	1852	
Hawes, E. C	Columbia	Appling	1852	
Heard, T. O	Spalding	Griffin	1867	
Henry, G. C	Troup	West Point	1872	
Hook, E. B	Richmond	Augusta	1857	
Hoxey, Thomas	Muscogee	Columbus	1849	
Ingraham, E. P	Dougherty	Albany	1870	1873
Johnson, C. W	Bibb	Macon	1870	1875
Jones, B. O	Fulton	Atlanta		
Jones, J. W.	Fulton	Atlanta	1857	1871
Kirkscey, E. J. (V-P.)	Muscogee	Columbus	1871	1877
Kollock, P. M. (P.)	Chatham	Savannah	1852	1872
Lamar, T. R. (V-P.)	Bibb	Macon	1849	
Lightfoot, W. S	Bibb	Macon	1849	

NAME.	COUNTY.	POST-OFFICE.	ADMITTED.	DIED.
Lockhart, R. H.	Muscogee	Columbus	1855	
Long, Crawford W.	Clarke	Athens	1849	1878
Lumpkin, George	Oglethorpe	Maxey's Depot	1859	
Lumpkin, S. P.	Clarke	Watkinsville	1859	
Mafflitt, R. G. W	Whitfield	Dalton	1859	
McBride, W. G.	Washington	Oconee		1873
McGouldrick, R	Bibb	Macon	1849	
McKie, J. D.	Richmond	Augusta	1852	
McKinley, C. A.	Coweta	Newnan	1859	
Means, O. S.	Newton	Oxford	1857	
Meiere, William S	Morgan	Madison	1857	
Morrison, D. H.	Chatham	Savannah	1868	1869
Musgrove, W. C. (C. S.)	Burke	Midville	1849	1876
Nash, R. A.	Twiggs	Marion	1849	
Nisbet, R. H.	Putnam	Eatonton	1854	1873
Nottingham, C. B. (S.T.&P.)	Bibb	Macon	1849	1876
Ogilby, H. J	Morgan	Madison	1849	1873
O'Keefe, D. C. (S.)	Fulton	Atlanta	1852	1871
Orme, L. H. (S.)	Fulton	Atlanta	1866	1872
O'Sullivan, ——.	Lee	Cork	1849	
Owen, J. D	Baldwin			
Parsons, J. M.	Monroe	Russellville	1849	
Pitts, G W	Butts	Starr	1859	
Posey, J. F.	Chatham	Savannah	1851	
Pringle, W	Newton	Covington		
Ragan, J. H.		Palmyra	1856	
Richardsone, C. P.	Chatham	Savannah	1851	1853
Ridley, R. A. T. (V. P.)	Troup	LaGrange	1859	1871
Robertson, J. J.	Wilkes	Washington	1852	1872
Roddy, R. L. (V-P.)	Monroe	Forsyth	1849	1878
Ruffin, W. R	Richmond	Augusta	1852	
Russell, W. J.	Gwinnet	Lawrenceville	1861	
Ryan, T. D. L.	Pulaski	Hawkinsville	1859	1876
Saffold, S. J.	Morgan	Madison	1856	
Shropshire, J. W			1871	
Simmons, J. N.	Fulton	Atlanta		1871
Simmons, S. B	Richmond	Augusta	1852	
Simmons, T. A	Wilkinson	Irwinton	1871	1872
Smith; A. D	Macon	Montezuma	1871	

NAME.	COUNTY.	POST-OFFICE.	ADMITTED.	DIED.
Smith, C. W.	Clayton	Jonesboro	1859	
Smith, Thomas	Chatham	Savannah	1858	1876
Spier, W. A.	Coweta	Grantville.	1859	
Stalling, J D.	Webster	Preston	1871	
Starr, E. P.	Chatham	Savannah	1868	1873
Steele, H.	Crawford	Knoxville	1849	
Steele, R. T.	Campbell	Fairburn	1849	
Stephens, W. B.	Monroe	Forsyth	1849	
Stewardson, Thomas	Chatham	Savannah	1849	
Strozier, L. L.	Dougherty	Albany	1867	
Sutton, C. B.	Lee		1856	
Taylor, E. T.	Muscogee	Columbus	1855	
Taylor, R. N.	Pulaski	Hawkinsville	1850	
Thompson, Charles	Bibb	Macon	1849	
Trammell, A. A.	Monroe	Forsyth	1856	
Wall, W. W.	Gordon	Calhoun	1860	
Ware, E. A. O.			1859	
Wells, C. H.	Chatham	Savannah	1853	1854
West, Charles (P.)	Houston	Perry	1849	
West, C. W.	Chatham	Savannah	1853	1859
White, S. G. (V-P.)	Baldwin	Milledgeville	1868	1877
Whitlock, J. W.	Wilkes	Washington	1852	
Wiley, J. B.	Bibb	Macon	1849	
Williams, T. L.	Dooly		1849	
Willingham, Willis	Oglethorpe	Lexington	1849	
Winn, G. A.	Monroe	Bolingbroke	1849	
Woodson, C. T.	Houston	Wilna	1854	
Wooten, W. H.	Oglethorpe	Lexington	1852	
Wragg, J. A.	Chatham	Savannah	1853	

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Long experience in manufacturing Malt Extract has enabled us to completely overcome the many difficulties attending its manufacture in large quantity; and we positively assure the profession that our Extract of Malt is not only perfectly pure and reliable, but that it will keep for years, in any climate, without fermenting or molding, and that its flavor actually improves by age. Our Extract is guaranteed equal, in every respect, the best German make, while, by avoiding the expenses of importation, it is afforded at less than half the price of the foreign article.

The Malt from which it is made is obtained by carefully malting the very best quality of selected Toronto Canada Barley. The Extract is prepared by an *improved process*, which prevents injury to its properties or flavor by excess of heat. IT REPRESENTS THE SOLUBLE CONSTITUENTS OF MALT AND HOPS, viz: MALT SUGAR, DEXTRINE, DIASTASE, RESIN and BITTER of HOPS, PHOSPHATES of LIME and MAGNESIA, and ALKALINE SALTS.

Attention is invited to the following analysis of this Extract, as given by S. H. Douglas Professor of Chemistry, University of Michigan, Ann Arbor:

Trommer Extract of Malt Co.: I enclose herewith my analysis of your Extract of Malt:

Malt Sugar, 46.1; Dextrine, Hop-bitter, Extractive Matter, 23.6; Albuminous Matter (Diastase), 2.469; Ash—Phosphates, 1.712. Alkalies, .377; Water, 25.7. Total, 99.958.

In comparing the above analysis with that of the Extract of Malt of the German Pharmacopœa, as given by Hager, that has been so generally received by the profession, I find it to substantially agree with that article. Yours truly,

SILAS H. DOUGLAS,
Professor of Analytical and Applied Chemistry.

This invaluable preparation is highly recommended by the medical profession, as a most effective therapeutic agent, for the restoration of delicate and exhausted constitutions. It is very nutritious, being rich in both muscle and fat producing materials.

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The dose for adults is from a dessert to a tablespoonful three times daily. It is best taken after meals, pure, or mixed with a glass of milk, or in water, wine, or any kind of spirituous liquor. Each bottle contains 1½ pounds of the Extract.

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Extract of Malt, with Hops (Plain)	$1 00
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" " " " Cod Liver Oil	1 00
" " " " Cod Liver Oil and Iodide of Iron	1 00
" " " " Cod Liver Oil and Phosphorus	1 00
" " " " Hypophosphites	1 50
" " " " Iodides	1 50
" " " " Alteratives	1 50
" " " " Citrate of Iron and Quinia	1 50
" " " " Pepsin	1 50

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(See Transactions of American Medical Association for 1876, p. 176.)

Is presented to the medical profession, as an efficient, palatable and very stable combination, consisting of equal parts of the EXTRACT OF CANADA BARLEY MALT and the best quality of genuine NORWEGIAN COD LIVER OIL Many patients take ths preparation who cannot take the oil in any other form. It my be employed in all cases where Cod Liver Oil is appropriate, but is peculiarly adapted to those complicated with disordered digestion.

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With Cod Liver Oil and Phosphorus.

Consists of equal parts of Extract of Malt and pure, fresh Norwegian Cod Liver Oil, Phosphorus being added in the proportion of 1-100 grain to the dose, and so combined as to be perfectly protected from oxidation. The TROMMER EXTRACT OF MALT COMPANY prepare this combination agreeably to the suggestion of DR. WILSON FOX. It is specially adapted to cases of phthisis, bronchitis, pernicious anæmia, and diseases of the nervous system.

EXTRACT OF MALT,

With Cod Liver Oil and Iodide of Iron

added in the proportion of one grain to the dose. This combination is intended to meet those cases where the physician desires to add a more energetic alterative and restorative to the treatment with Cod Liver Oil and Extract of Malt. The manufacturers have received numerous letters from prominent physicians referring to it in terms of high praise.

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THE COLLEGIATE YEAR in this Institution embraces a preliminary Autumnal Term—the Regular Winter Session, and a Spring Session.

THE PRELIMINARY AUTUMNAL TERM for 1878-1879 will open on Wednesday, September 18, 1878, and continue until the opening of the Regular Session. During this term, instruction, consisting of didactic lectures upon special subjects and daily clinical lectures, will be given, as heretofore, by the entire Faculty. Students expecting to attend the Regular Session are strongly recommended to attend the Preliminary Term, but attendance during the latter is not required. *During the Preliminary Term, clinical and didactic lectures will be given in precisely the same number and order as in the Regular Session.*

THE REGULAR SESSON will begin on Wednesday, October 2, 1878, and end about the 1st of March, 1879.

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ERSKINE MASON, M.D.,
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J. LEWIS SMITH, M.D.,
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LEROY MILTON YALE, M.D.,
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A distinctive feature of the method of instruction in this College is the union of clinical and didactic teaching. All the lectures are given within the Hospital grounds. During the Regular Winter Session, in addition to four didactic lectures on every week day except Saturday, two or three hours are daily allotted to clinical instruction.

The Spring Session consists chiefly of Recitations from Text-books. This term continues from the 1st of March until the 1st of June. During this Session, daily recitations in all the departments are held by a corps of examiners appointed by the Faculty. Regular clinics are also given in the Hospital and in the College building.

FEES FOR THE REGULAR SESSION.

Fees for Tickets to all the Lectures during the Preliminary and Regular Term, including Clinical Lectures	$140 00
Matriculation Fee	5 00
Demonstrator's Ticket (including material for dissection)	10 00
Graduation Fee	30 00

FEES FOR THE SPRING SESSION.

Matriculation (Ticket good for the following Winter)	$ 5 00
Recitations, Clinics and Lectures	35 00
Dissection (Ticket good for the following Winter)	10 00

Students who have attended two full Winter courses of lectures may be examined at the end of their second course upon Materia Medica, Physiology, Anatomy and Chemistry, and, if successful, they will be examined at the end of their third course upon Practice of Medicine, Surgery, and Obstetrics only.

For the Annual Circular and Catalogue, giving regulations for graduation and other information, address Prof. AUSTIN FLINT, JR., Secretary Bellevue Hospital Medical College.

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Professor of Physiology and Pathology.

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GEORGE C. DUGAS, M.D., Adjunct to the Professor of Surgery.
GEORGE A. WILCOX, M.D., Demonstrator of Anatomy, and Prosector to the Professor of Anatomy.
CHARLES W. HICKMAN, M.D., Assistant Demonstrator of Anatomy.

CLINICAL ASSISTANTS, AND LECTURERS ON SPECIAL SUBJECTS.

GEORGE C. DUGAS, M.D., Minor Surgery.
GEORGE A. WILCOX, M.D., Nervous Diseases
CHARLES W. HICKMAN, M.D., Ophthalmology.
LEWIS R. FORD, M.D., Diseases of the Chest.
E. C. GOODRICH, M D., Laryngoscopy.
A. E. DUGAS, M.D., Diseases of Male Organs of Generation.
A. H. BAKER, M.D., Diseases of Female Organs of Generation.
JOSEPH EVE ALLEN, M.D., Diseases of Children.
THOMAS R. WRIGHT, M.D., Diseases of Abdominal Organs.

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THE FORTY-SEVENTH ANNUAL SESSION will commence on the first Monday in October, and end the 1st of March following.

FEES, ETC.

In harmony with the scale of Fees adopted by other departments of the University, as well as in compliance with the implied wish of the profession for lower rates of tuition, the following schedule of charges will be observed:

Matriculation Fee (to be taken once)	$ 5 00
Tickets of Full Course	50 00
Practical Anatomy (once)	10 00
Diploma	30 00

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This institution has always recognized the claims of deserving and aspiring young men, who are not able to incur the expense of a thorough Medical Education, and admitted them without invidious distinction. In compliance with the requirements of the Charter, two students from each Congressional District of Georgia will be admitted gratuitously. Application should be made to the Dean, accompanied with certificates from either the Judges of the Superior Court or Ordinary of the county.

Further information will be given by application to DESAUSSURE FORD, Dean.

ATLANTA MEDICAL COLLEGE.

SESSION 1878–'79.

The Twenty-first Annual Course of Lectures will open on the Fifteenth of October, 1878, and close on the Fourth of March, 1879.

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J. G. WESTMORELAND, M.D.,
Professor of Materia Medica and Therapeutics.

W. F. WESTMORELAND, M.D.,
Professor of Principles and Practice of Surgery.

WM. ABRAM LOVE, M.D.,
Professor of Physiology.

V. H. TALIAFERRO, M.D.,
Professor of Obstetrics and Diseases of Women and Children.

JNO. THAD. JOHNSON, M.D.,
Professor of General and Descriptive Anatomy; Lecturer on Venereal Diseases.

A. W. CALHOUN, M.D.,
Professor of Diseases of the Eye and Ear, and Clinical Ophthalmology and Otology.

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Professor of Principles and Practice of Medicine.

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